NATIONAL PETROLEUM NEWS

Regulation of Production in Near East Discussed at Scotland Conference

(By Cable to National Petroleum News)

LONDON, Aug. 18

INTERNATIONAL coordination of effort among world oil companies to stop uneconomic production of crude is in the making.

A conference held this week at Anchacarry Castle, Inverness-shire, Scotland, discussed the production situation in the near east in general and, in particular, the development of the internationally-owned Turkish Petroleum Co., operating in the new kingdom of Iraq.

While it is not officially admitted, it is generally understood that the Russian soviet government tacitly agreed to some of the proposals made at the conference in Scotland, taking the point of view that some regulation of world production of crude oil, if it could be brought about, would mean better prices for their products in world markets. Russian fields are capable of increasing production and without Russian cooperation restrictive efforts in the near east would be vitiated.

Interests of American oil companies were represented at the conference by Walter C. Teagle, president of the Standard Oil Co. of New Jersey, and also president of the Near East Development Corp., a $5,000,000 Delaware corporation formed to represent the holdings of five American interests in the Turkish Petroleum Co.

The Standard Oil Co. of New Jersey, Gulf Oil Corp., Standard Oil Co. of New York, Atlantic Refining Co., and Pan-American Petroleum & Transport Co., are the five American interests which together hold 23¾ per cent of the Turkish Petroleum Co.

The British, Dutch and French interests each hold 23¾ per cent of the Turkish Petroleum Co., which was formed when international complications arose at the end of the war as to what nation was to have preference in securing lands in Iraq, then known to be rich in petroleum deposits. The remaining five per cent interest is held by a Canadian company.

Others known to be in attendance at the conference in Scotland were Sir Henri H. W. Deterding, head of the Royal Dutch-Shell group, whose participation in the Turkish Petroleum Co. is through the subsidiary Anglo-Saxon Petroleum Co., Ltd., and Sir John Cadman, head of the Anglo-Persian Oil Co., representing the British interests through the subsidiary D'Arcy Exploration Co., Ltd.

It is known other individuals connected with the oil industry were present at the Anchacarry Castle conference, but whether these included representatives of the Dutch and French interests in the Turkish Petroleum Co. is not known.

American, British and Dutch interests are understood to favor maintaining what is known as the Mosul reserve in Iraq until greater demand for crude supplies appears in the world markets.

THE conference has broken up for the present and the principal participants have dispersed for consultation with their own national interests. Later it is anticipated they will meet again for further discussion.

The American point of view, as presented at the conference this week, was that American oil companies have practiced curtailment of production in their own fields to a great extent this year to avoid increasing the oversupply of crude and that other countries should follow somewhat the same principle, particularly as regards Venezuela, where the Shell interests have large production and Colombia, where the Standard Oil Co. of New Jersey has about 50,000 barrels daily production.

It is understood that the Standard of New Jersey and the Shell interests are getting into line as regards a policy to be followed in Venezuela, with the help of the Standard Oil Co. of Indiana interests, which are also important there. The Gulf Oil Corp. is the other of the "Big Four" in Venezuela.

It was brought out at the conference that no overproduction of crude exists in Europe or the near or far east, except in Persia and the Mosul province of Iraq, where there are fields with a large potential surplus of output.

The Anglo-Persian Oil Co. in Persia produces 100,000 barrels daily, and present wells could easily double this amount, it is understood. This company also recently discovered a new rich field in Persia. The Turkish Petroleum Co.'s holdings in Iraq are understood to be equally promising.

The British interests claim that any plan to control or regulate world production should take into consideration that the Anglo-Persian's properties in Persia have been operated with 100,000 barrels daily shut in for several years.

Iraq, formed from Turkish territory after the war and mandated to Great Britain, formed a political battle ground for the nations with oil as the point of contention. American interests had for several years before the war negotiated with Turkey for concessions and with some success. In fact, one of the peculiar phases of the affair was the willingness of the Turk to grant concessions.

THAT the prize was a rich one is indicated by competent geologists who assert that the known petroliferous area in Iraq as of the time when the settlement was made was roughly 300 miles long north and south and 90 miles wide. Large wells have been drilled within the past year by Turkish Petroleum Co., reported to be of the caliber of wells completed several years ago in the "gusher" area of Mexico. Geological work has greatly increased the area of potential production.

Some confusion has been caused in the public mind by the reference to this area as Mosul. The latter is merely a town in the general region. Iraq is a wedge shaped country, extending northwest from its point at the head of the Persian

Gulf. Persia forms the eastern boundary, Armenian Turkey its northern, Syria the northwestern and Transjordania and certain Arabian principalities its southwestern.

* * *

NEW YORK, Aug. 20.—While the informal discussions in New York a few weeks ago on world wide production conditions are not known to be linked with the meeting in Scotland last week, the broad purpose underlying both is presumed to be identical: The establishment of a rate of development conformable to market requirements and with an eye to the situation in other parts of the world.

The present era of restriction began, of course, in the Seminole district of Oklahoma. In that district the most important of tangible achievements was the bottling up of the south Little River field and several other areas for periods of nine months to a year. Texas operators began their restrictive work not long after the first of the Seminole agreements were made and the Yates pool first and more recently the Winkler county field were greatly restricted in production.

In response to argument of Mid-Continent producers that their voluntary efforts were being cancelled out by continued development in South America, a committee was appointed to discuss the matter with companies producing oil in Venezuela and Colombia. The committee was headed by E. B. Reeser, president of the Barnsdall Corp. Other members were W. S. Fitzpatrick, chairman of the board of the Prairie Oil & Gas Co.; E. L. DeGoyler, president of the Amerada Petroleum Corp.; Jacob France, president of the Mid-Continent Petroleum Corp., and Axtell J. Byles, president of the Tide Water-Associated Oil Corp.

While nothing approximating a world wide plan for development is expected to ensue, indications are that the work thus done, more or less as localized effort, will be productive of general betterment in the industry.

To Limit Oklahoma Output To 700,000 Barrels Daily

Staff Special
TULSA, Aug. 18

A STATE-WIDE restrictive movement is under way to limit Oklahoma oil production to 700,000 barrels daily. This announcement was made by Umpire Ray M. Collins at a meeting of the Mission pool operators Aug. 14, at which time the present restrictions on that pool were continued for a 30-day period.

Although this meeting was held to consider the Mission pool, the majority of the operators in the Mission area are those whose operations extend throughout the state. Opinions expressed by those present gave every indication that such a move would meet with the hearty support of oil men generally.

Present production in the state is in the neighborhood of 670,000 barrels per day. This is an increase of about 70,000 barrels per day over the figure of a week ago. It is felt that the total will go well beyond the 700,000 barrel per day mark unless stringent restrictive measures are adopted. The industry can, it is said, absorb this much oil without danger to the present price structure.

It has been the expressed opinion of many oil men that restrictions which shut in one pool and allowed another to produce to capacity were not only unfair, but unsound. Such measures work a hardship on operators who own acreage in the restricted area but not in the producing territory. In effect, they are asked to remain inactive while others produce as they see fit. The question naturally is asked, "Why should one operator limit his production to protect the price that another gets for his oil?"

At the present time the St. Louis pool, of eastern Pottawatomie county, Oklahoma, is the only producing area of major proportions not under some sort of restriction. At the last meeting T. B. Slick, discoverer of the big pay in the Wilcox in the St. Louis pool, said that he would shut in his wells only under the consideration that all other drilling wells in the field be shut down for a like period. So long as his discovery rights in the field are preserved he said that he would cooperate to the fullest extent in restricting the field's output. At that time, August 7, T. B. Slick, Inc. and the Magnolia Petroleum Co. were the only producers with Wilcox sand wells in the field. Since that time the Independent Oil & Gas Co. has been added to the list with its Youts lease, which has three Wilcox wells making close to 21,000 barrels daily. Total production from the St. Louis field is 65,000 barrels from 94 wells including those producing from formations above the Wilcox. It was at this meeting that the advisory committee was asked to work out a plan covering all flush or prospective areas in the state. Umpire Collins has announced that there will be a general meeting Tuesday, Aug. 21, at which the plans as worked out by the committee will be discussed.

That the present scheme of things is unsatisfactory was well evidenced by the attitude of the Osage Council, represented at the last meeting by J. George Wright, superintendent of the Osage agency, W. A. Waid, oil and gas inspector for the agency, and George L. Alberty and Francis Revard, members of the council. According to Mr. Wright, the Indians felt that the restriction of 100 barrels per well imposed on leases sold out of the Naval Reserve worked a hardship on them by reducing the prices which oil men were willing to pay for the tracts. He said that the Osages were desirous of holding another sale about September 15, and asked that the committee endorse their request to the Secretary of the Interior to remove the restrictions, so that the leases might be taken with no more strings attached than there are to the commercial leases taken from other land owners.

According to Mr. Waid, production in the Osage has fallen from about 66,000 barrels per day at the time the restrictions were imposed, to about 52,000 barrels at the present time. It was their desire, he said, to build the production back to about the former figure, which he felt could be done without danger to the industry. The council representatives were quoted as being willing to have the same restrictions on their lands as the operators imposed on themselves in other producing territories. It is understood that their request will be compiled with by the advisory committee of the Mid-Continent Oil & Gas Association.

Ardmore Plant to Resume

(By Telegraph)

TULSA, Aug. 21.—Imperial Refining Co. is planning to resume operations at its Ardmore, Okla. plant about Sept. 15. A crew of 50 men is at work on the plant, putting it in condition. J. F. Reardon will be superintendent as formerly.

The Imperial plant is a 7000-barrel skimming plant equipped with the Dubbs cracking process. It was closed about Oct. 15 last year. Sales are handled through the Tulsa offices.

Fire Association Head Dies

ATLANTA, Aug. 20.—Allen M. Schoen, formerly fire protection engineer of Atlanta, died here Aug. 15.

Mr. Schoen was well known to engineers and executives of the oil industry who have been active in the American Petroleum Institute's fire prevention and safety work. He served for many years as an officer and on committees of the National Fire Protection Association, of which he was president when he died.

Venezuela is Past the Critical Stage As Market Disturber

By Edwin B. Hopkins and H. J. Wasson*

REASSURING predictions as to future volumes of crude produced in Venezuela reaching this country are made in this article by Authors Hopkins and Wasson, reviewing developments there in the first half of 1928. *It was written exclusively for* NATIONAL PETROLEUM NEWS.

In all probability, they say, rate of increase in production in 1929, *over* 1928, *will be smaller than in* 1928 *over* 1927.

Two factors will tend to prevent any rapid increase in production after this year, unless there is an actual market for the oil.

First—the saturation point for Venezuelan crude, which is not far off, they say, will be reached when increased profit from an increase in Venezuela output by companies with interests in this country will be counterbalanced by a loss on American operations.

Second—large interests operating in Venezuela are known to be planning a world-wide cooperative movement that can hardly fail to have a helpful effect on the world production situation in general.

THE first half of the present year, in Venezuela, has witnessed a steady increase in production, but in an orderly way; and with only a very slight increase in drilling activity.

Production for the country, at the end of June, was running at the rate of about 275,000 barrels a day, or an increase of 70,000 barrels over the daily output at the beginning of the year. From a percentage standpoint, this increase is about 53 per cent over last year's average, which is a considerable drop from the 70 per cent increase of 1927, over 1926. As was to be expected, the annual rate of increase which for several years past has amounted to almost a doubling of the previous year's production, has been somewhat reduced, and from now on, the oil industry may look for a more moderate rate of expansion in this country.

Three promising new areas were added to the list of potential localities as a result of the wildcat drilling operations:

The Tia Juana No. 1 well, of the Lago Petroleum Corp. located along the shore of Lake Maracaibo, about 6 miles south of La Rosa, found the top of a moderately prolific oil zone at a depth of 1890 feet, and is reported to have given an initial production of 1500 barrels. This well is shut in at present, with a total depth of 2480 feet. Though situated several miles away from the nearest production, the Tia Juana well probably marks an extension of the La Rosa field, rather than an isolated new field. In this locality the Venezuela Gulf Oil Co. is now drilling a well about 1500 feet north, and Lago is starting another well, to be called Tia Juana No. 17, about 3000 feet south of the discovery.

Another successful completion was Amana No. 1, drilled by the Venezuelan Gulf Oil Co., in the District of Mara. This well found several oil sands ranging in depth from 3298 feet to 4180 feet. The full potential initial output of the well is probably around 300 barrels a day. The oil is of good quality, with a gravity of about 30.5 degrees Baume. The well, which is now closed in at a total depth of 4180 feet, may be considered the discovery of a potential field.

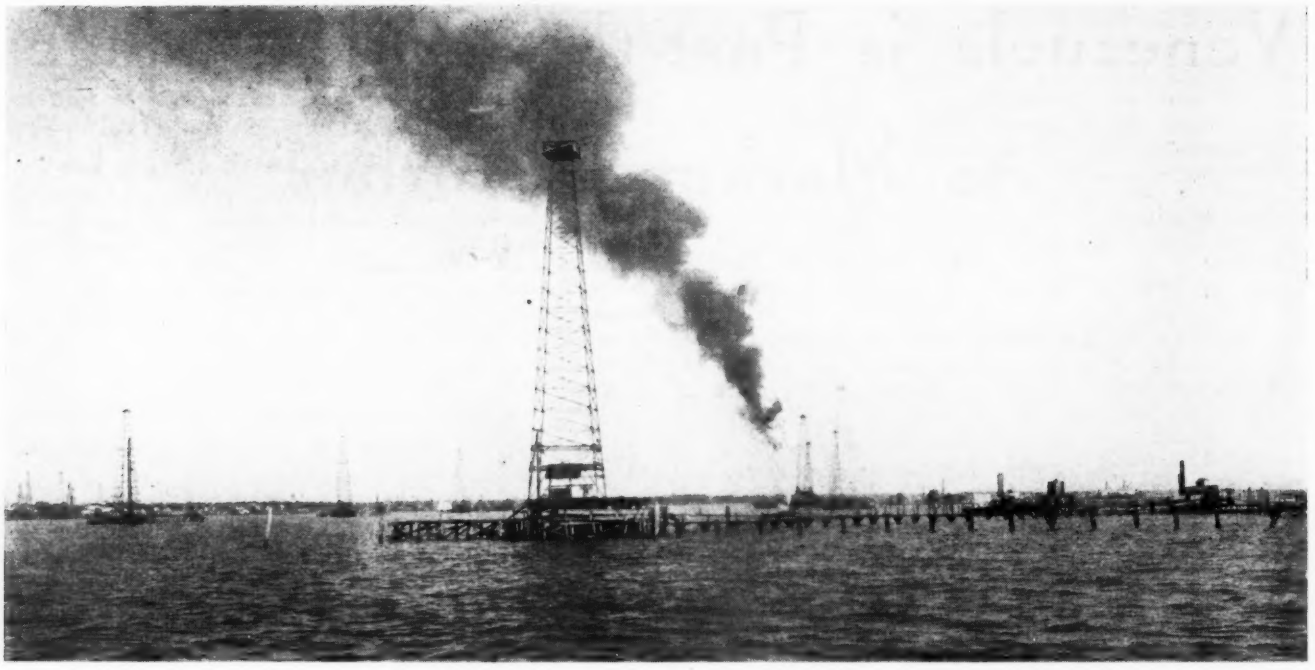
In the northern part of the District of Perija, in the so-called Rio Palmar field, the Standard Oil Co. of New Jersey, and Creole interests, are actively engaged in opening up what appears to be a new potential area. An old producer, known as Zambapalo No. 2, was completed in 1915, but had been shut in for years, because of litigation. Upon the clearing up of the legal difficulties, the present controlling interests reworked the old well, and found a producer good for several hundred barrels a day. Three new drilling operations are now under way in the Rio Palmar field, and the chances for developing a substantial area of producing territory are favorable.

Of the potential areas discovered prior to 1928, two are moving ahead with production plans. The Standard of Venezuela (Standard Oil Co. of New Jersey), has completed 3 producers in the Hombre Pintado field, and has connected up with the El Mene field of the British Controlled Oilfields, Ltd., with a 4-inch pipe line. Only a few hundred barrels have been shipped through this line as yet, but the indications point to the opening up of a new field that may be capable of doing around 5000 barrels a day by the middle of next year.

The Hombre Pintado field, is located in the State of Falcon, 10 miles east of the El Mene field. It resembles the latter in respect to high gravity, and shallow depth of oil, and in the comparatively small initial production of the wells which will probably average under 500 barrels.

In the District of Colon, in the southwestern part of the Maracaibo Basin, the long years of prospecting and test-drilling, that have been going on since 1915, have at last built up a reserve of production sufficient to cause the Royal Dutch, Carib Syndicate, and affiliated interests, to proceed with definite plans for the construction of a pipe line. This line will be about 87 miles in length, and will connect the Tarra field with the lake shore. The financing of the pipe line, and other necessary facilities, has been accomplished through the selling of a $10,000,000 bond issue, underwritten by prominent New York banking interests. An aggressive campaign of construction, and additional drilling, will be in full swing before the end of the year; and production from the District of Colon should be moving to lake-side, by about the third quarter of 1930. The proposed pipe line will have a capacity of 20,000 barrels per day, and oil reserves are known to be ample to insure the maintenance of this rate of output. These operations will be carried out by the Colon Oil Corp., a new company, set up to consolidate the various interests in the Colon Concession.

*Consulting geologists, New York.



Producing wells have been completed in the La Rosa field, a mile out in Lake Maracaibo and in water up to 30 feet deep. Most of these wells have been shut in, but they established existence of a large oil reserve

In the shipping fields, the greatest activity has been in the Lagunillas area. The proven territory of this field, has been notably extended since the first of the year, and now includes approximately 6100 acres. The field is over six miles long, and the extremities are as yet not defined.

The completion of Lago No. 66, on the north, as a gas well, may indicate that the northern limit of the field is being approached. On the other hand, the recent completion of Laguna No. 2, for 5000 barrels, by the Gulf company, indicates that the southern limits are still indefinite, in spite of some falling off in production of other wells, in that part of the field. Westward out into the lake, and eastward back inland, there is little to suggest the limits of the field.

SOME of the largest wells have been completed at distances of over a mile from the shore, and in water up to 30 feet in depth. Most of the wells farthest out in the lake, are closed in, but they have established the existence of a very large oil reserve, which can be drawn on when needed.

As is generally known, the Lagunillas field, and for that matter, the La Rosa and other East Lake shore fields, are split up between the three operating companies; Venezuelan Oil Concessions, Ltd. owning from the Lake shore inland; Lago Petroleum Corp. owning the entire lake up to a line one kilometer from shore; and Lago and Gulf sharing about equally the territory inside the "kilometer strip." With the Gulf company are affiliated, the Creole Petroleum Corp., and the Venezuelan Petroleum Corp., who have royalties, or working interests, in the properties operated by the Gulf. Gulf also owns considerable territory within the "kilometer strip" free from association with any other interests.

In this area where the average initial production per well is around 4,000 barrels through a one-inch choke, there is taking place the nearest thing to a line fight that can be found in Venezuela. But, at worst, it is a tame performance compared with the usual thing in the U. S. Altogether, there were about 20 rigs in operation at Lagunillas at the end of June. A recent speeding-up of operations has increased the activity to 30 rigs, which will probably be maintained throughout the balance of the year.

In the older La Rosa area, including Ambrosio and Punta Benitez, the same three companies are maintaining a combined drilling program of 10 rigs. The area of the field has been substantially increased since the first of the year, and now includes approximately 11,900 acres of proved territory. A large percentage of the producing wells in the La Rosa field are shut in, and its present production is well below its potential possibilities.

IN THE territory intervening between La Rosa and Lagunillas two wildcats have been completed as producers. Though these two wells, San Matias No. 1 and Tia Juana No. 1, are at present shut in, they have gone a long way toward substantiating the belief held by many, that the La Rosa and Lagunillas fields will eventually join as a continuous stretch of producing territory.

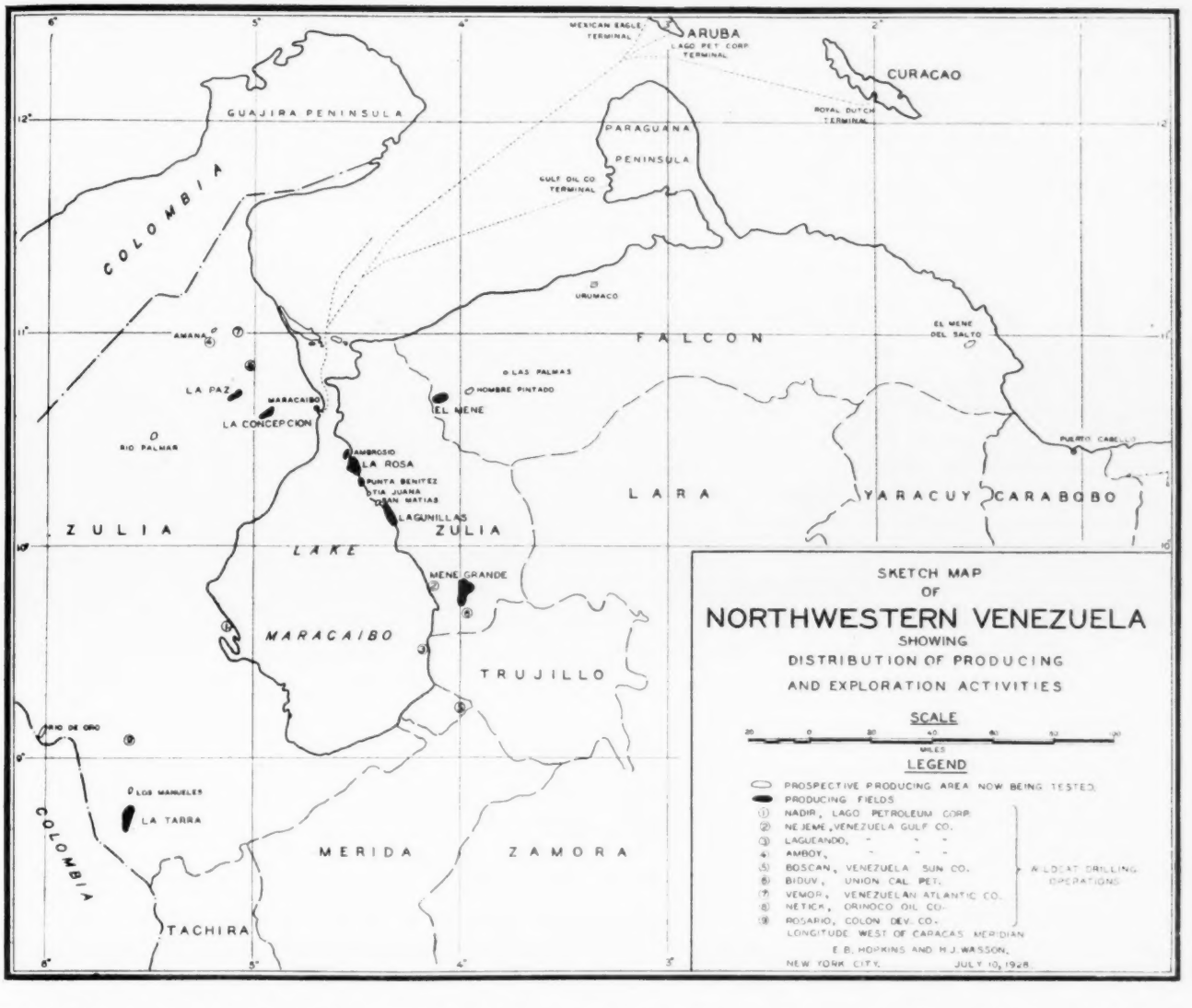
Mene Grande, the other heavy oil producing field, has had a rather unusual record for the first half of the year. Early in the year, production was boosted up to a peak of 50,000 barrels a day, and the field was comparatively active with eight rigs running. At the present writing, however, Mene Grande is only operating four strings of tools, and production has dropped off to about 20,000 barrels a day. The amount of oil drawn from this field is controlled largely, if not entirely, by the situation prevailing in areas where the Royal Dutch group is faced with the competitive activities of other companies. As long as there is available flush production along the common boundary lines at Lagunillas, it may be expected that it will have first call on the available transport facilities, and Mene Grande, which is entirely free from offset competition, will be drawn on only as may be required

Weighted Average Prices Oklahoma Market

On Feb. 6, 1928, National Petroleum News adopted the policy of publishing weighted average prices on the four more important gasolines in Oklahoma, instead of a range in prices. These weighted averages together with the number of cars of each grade sold, as of Monday, Aug. 20, are published below. The figures are not available for publication in the refinery market table on page 93 of this issue.

	Total Cars	Weighted Average
58-60 U. S. Motor, 437 e. p.	97	9.7500
60-62, 437 e. p.	4	10.0938
60-62, 400 e. p.	6	10.3542
64-66, 375 e. p.	1	11.0000

Note: Above prices are in cents per gallon, f.o.b. Oklahoma refinery in tank car lots.



to keep the tanker fleet working at 100 per cent efficiency.

La Paz and Concepcion, the two light oil fields of the V.O.C., on the west side of the Lake, are still closed down tight, except for the furnishing of a little oil for nearby wildcat drilling. These fields will probably not open up until the V.O.C. boundary line along the Lake shore is well protected, which may be several years hence.

EL MENE, of the British Controlled Oilfields, Ltd., the other light oil field, is producing about 4,500 barrels daily. The company has 10 rigs in operation, and a large part of the drilling is now in new territory outside the field.

A comprehensive plan of gas lift is being tried out at El Mene, and it is reported that very successful results have been obtained in bringing up the production of old wells which had gone completely dead.

This field has never been distinguished by any large gusher type wells. Wells of over 1000 barrels initial production have been rare. However, the settled production has declined very slowly, so that in spite of the comparatively small area, and average size of well, the field as a whole, has held up remarkably well.

The El Mene field includes some 950 acres of proved territory, which appears to be completely defined. The average depth of the producing zone is about 1100 feet, and the thickness of the oil sand about 25 feet. The possibilities below the 1100-foot level, have not been thoroughly tested, and deeper producing horizons will probably be found as time goes on.

The present status of the strictly wildcat drilling, is shown on the accompanying map of northwestern Venezuela. None of these wells have given any very promising evidences so far. The semiproved areas, Amana and Rio Palmar, have already been mentioned, and are not to be confused with the wildcat wells shown on the sketch.

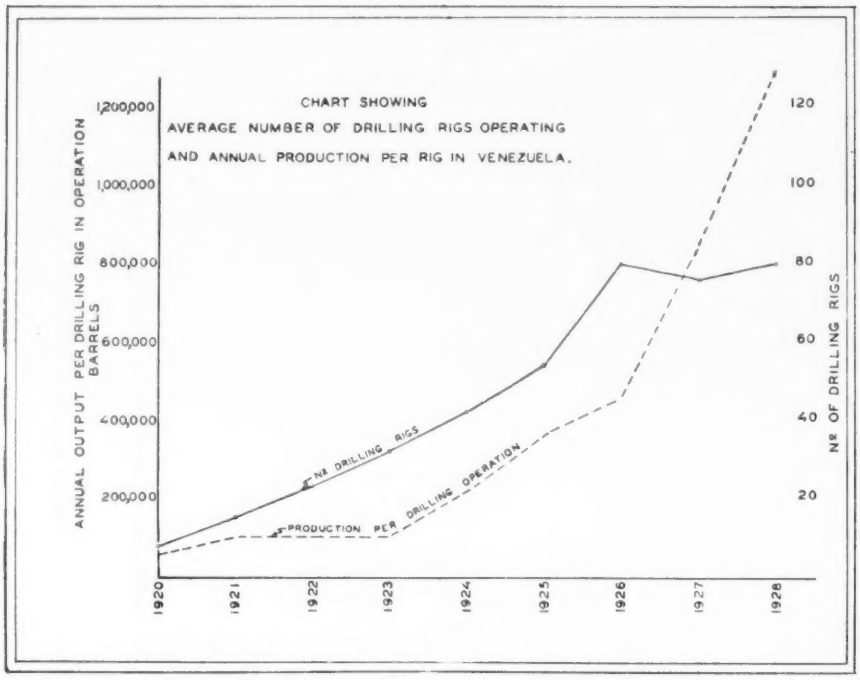
The status of production and drilling activity, brought up to the end of June, is shown in the Table, Fig. 1.

In the second half of the year, production and exports, will be considerably larger, as each shipping company has added several units to its fleet of lake tankers. The construction of steel storage has, also, taken a very decided jump, and these factors, together, point to a total production for the year of about 100,000,000 barrels.

THE production picture is incomplete without taking into account at the same time the amount of drilling activity; and from figures alone, a clear understanding of the situation may not be simple. The accompanying graph (Fig. 2), has been prepared with a view of showing the Venezuelan production history for the last few years, as it has varied with the amount of drilling activity, it being thought possible that such a portrayal of the record may have more significance for the oil man than the mere figures for total annual production. In considering this graph, the reader should bear in mind that the figures representing the average number of drilling rigs in operation, include all wildcat operations, as well as the rigs working in the fields. Also, the "production per drilling operation," is the average for the entire country, and includes all the fields, and all the drilling operations. Obviously, a curve drawn for a single field such as Lagunillas, or Mene Grande, would show a very much greater rate of production obtained

per rig operated, than the average for the country as a whole here depicted.

A similar analysis of the production with respect to drilling activity for the state of California, shows that for the last four years there have been on the average about 410 rigs in operation, with a total production for the state of approximately 560,000 barrels per year, per drilling operation, which, as may be seen from the graph, is less than half as satisfactory as the existing ratio in Venezuela, where for 1928, some 1,400,000 barrels will be produced for each drilling rig operated.



In Eastern Venezuela, the principal interest is centered around the work of the Standard (N. J.), on its Moneb parcel. Moneb No. 1 was completed in 1926, as a 40-barrel pumper; and Moneb No. 2, in April of the present year struck a showing of oil that blew several stands of pipe out of the hole, and flowed for a time at an estimated rate of 1000 barrels a day. The oil in Moneb No. 2, is of about 19 degrees gravity, considerably lighter than any oil heretofore struck in this part of the country. Both Moneb No. 1 and No. 2, are at present being deepened, and the outlook for Eastern Venezuela has received considerable encouragement.

In the vicinity of the large Guanaco Asphalt Lake, the General Asphalt Co. is continuing the production, and shipments of 10 degrees gravity oil started in 1927. Two drilling rigs are in operation, and present production averages about 1000 barrels a day. About 8 wells had been completed to the end of June, and the Guanaco field is taking on some appearance of permanence. The Asphalt company uses this heavy oil, which is transported in a specially designed tanker, in connection with the crude asphalt obtained in Trinidad, and from Guanaco Lake itself.

The refining branch of the industry, that has grown up in the Caribbean area tributary to Venezuela and Colombia, is quite worthy of note, as it is assuming major proportions.

Outside of the several small refineries inside the Lake, which together can handle about 12,000 barrels a day, there is the Royal Dutch plant on the Island of Curacao, rated at some 100,000 barrels a day, and on the nearby Island of Aruba, the newly completed topping plant of the Mexican Eagle, rated at 15,000 barrels; and the new refinery of the Lago upon which construction has been started, which will have a capacity when completed, of 65,000 or more barrels daily.

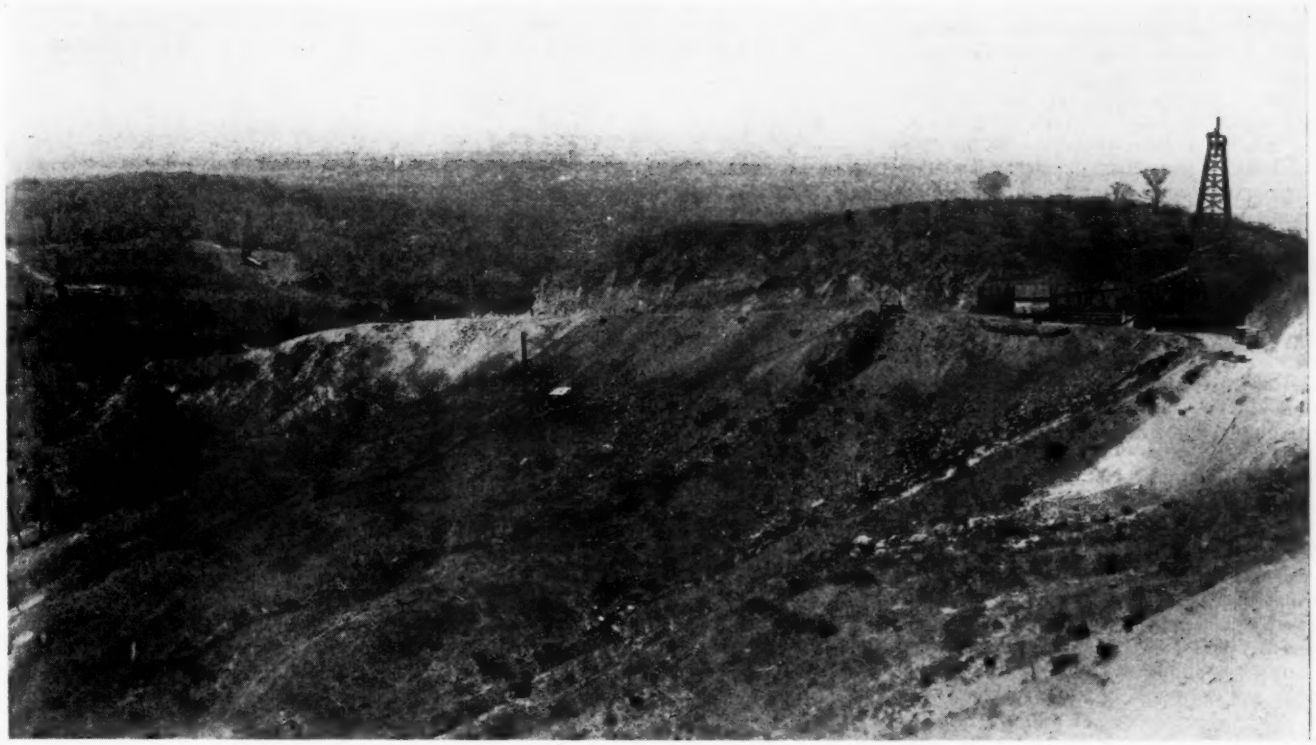
THE construction of these refineries will have little effect on the price situation in the United States, as the gasoline contained in the oil in large part comes on the American market regardless of where it is refined. Their real effect would seem to be confined solely to the benefits they may return to the capital invested in their construction.

With respect to transportation of the oil from inside the Lake to deep water, this is still taken care of entirely by the shallow draft Lake tanker fleets. The capacity of the combined fleets, numbering some 60 vessels, is now over 8,000,000 barrels a month. The most notable occurence in this phase of activity, was the introduction by the Gulf company, of three new tankers having a capacity of about 20,000 barrels over the bar at the mouth of the Lake. Previously the most efficient vessels could handle a little less than 17,000 barrels per trip, and most of them are rated at around 16,000 barrels or less. Doubtless the limit of oil carrying capacity for vessels drawing only 11½ feet of water, will be

VENEZUELAN OIL STATISTICS TO JUNE 30 1928

FIELD	DRILLING SUMMARY								PRODUCTION			AGE OF FIELD YEARS	GRAVITY OF OIL DEGREES BEAUME
	WELLS DRILLED PRIOR TO 1928		WELLS DRILLED 1ST HALF 1928		TOTAL WELLS TO JUNE 30 1928		AVE DEPTH OF HOLE	WELLS DRILLING JUNE 30 1928	PRIOR TO 1928	DURING 1ST HALF 1928	CUMULATIVE TO JUNE 30 1928		
	PRODUCERS	DRY HOLES	PRODUCERS	DRY HOLES	PRODUCERS	DRY HOLES	DRILLED IN 1927						
MENE GRANDE	137	3	11	2	148	5	2625 FT.	4	37,504,882	6,700,000	44,204,882	12	18
LA ROSA	318	10	32	1	350	11	2684 "	9	53,566,861	11,320,000	64,886,861	6	25
EL MENE	131	54	7	13	138	67	1100 "	7	8,437,109	983,000	9,420,109	5	36
LA PAZ	26	3	0	0	26	3	1500 "	0	1,306,427		1,306,427	4	25
CONCEPCION	64	1	0	0	64	1	1500 "	0	1,637,759		1,637,759	4	36
AMBROSIO	42	3	4	1	46	4	2370 "	0	1,989,717	15,006	2,004,723	3	24
PUNTA BENITEZ	29	2	3	2	32	4	2530 "	1	892,884	520,000	1,412,884	3	28
LAGUNILLAS	71	0	53	0	124	0	3520 "	18	30,307,913	24,100,000	54,407,913	3	17.5
LA TARRA	15	8	1	1	16	9	1470 "	5	175,000	87,500	262,500		30
RIO DE ORO	4	0	0	0	4	0	3105 "	0	50,000		50,000		27
GUANOCO	6	0	0	2	6	2		2	858,906	204,000	1,062,906	3	10
HOMBRE PINTADO	0	0	3	0	3	0		2				·	
WILDCAT OPERATIONS	9	100	4	13	13	113		22					
TOTAL »	852	184	118	35	970	(1) 219		70	136,727,458	(2) 43,929 508	180,656,964		

(1) DRY HOLES INCLUDE WELLS ABANDONED FOR MECHANICAL REASONS.
(2) JUNE PRODUCTION FIGURES ESTIMATED.



The Tarra field of the Colon Development Co., district of Colon, state of Zulia, Venezuela

further increased, and of course, every improvement in this direction, will effect a corresponding reduction in water transportation cost, which still constitutes a substantial charge against Venezuelan operations.

Venezuela has, after several years of spectacular progress, risen from comparative obscurity, to the position of world's second oil producing country.

As a natural consequence of this rise, and partly because of its geographical position, Venezuela has become a major factor in American oil affairs, and its present and future bearing on the general economic situation in the United States is being closely watched—and not without considerable apprehension in some quarters.

How far the expansion of production in Venezuela will go, in the face of markets unable to absorb even the present output, seems to be the question uppermost in the minds of many operators, and this particular question in its proper relation with respect to the general overproduction throughout the world, is well worthy of attention. However, in considering Venezuela, or any other oil producing area for that matter, it should be borne in mind that any individual locality is important only in about the ratio that its annual production bears to the world's total. Thus, Venezuela is about as important at the moment, as the Hendricks and Yates fields, and no more.

It has been advocated that a tariff barrier against Venezuelan oil would relieve the situation in the United States, but such a proposal can hardly be taken seriously even by an industry characteristically lacking in mature economic perspective. The reasons for this are obvious, but hardly fitting subject matter for this article.

The only permanent improvement in the present unsatisfactory production situation, will be brought about by a curtailment of production through mutual agreements on the one hand, and through the stern force of necessity on the other. The change with oil, as as been the case with other commodities extracted from the earth's subsurface, may require a period of years, and it will certainly involve, among other things, a complete change in the psychology and mental processes which have constituted the directive consciousness of the oil industry through the first few decades of its history.

VENEZUELA'S contribution to the great economic change that is now taking place, will be constructive. Of this, the industry may be assured. The general situation in Venezuela, at the present moment, could not be more reassuring. All of the production, with minor exceptions, is split up among four of the world's strongest corporate units—Royal Dutch, S. O. of New Jersey, Gulf Oil Corp. and Standard Oil of Indiana, through its subsidiary, Pan-American Petroleum & Transport Co. Other large companies are represented by extensive holdings of prospective acreage, and some wildcatting is in progress, but underlying the entire Venezuelan industry there is a foundation of stability, and conservatism, from which the industry in general, throughout the United States, can draw some exceedingly helpful suggestions, as to the regulation of its own affairs.

While it is obvious that the solution of the industry's predicament lies in curtailment, it will be recognized that one of the greatest single factors making curtailment a physical possibility, is the consolidation of competitive holdings under single control; in a sense, the "unit control" idea, so obviously sound when a normal business development, however repugnant it may be when viewed as an obligation imposed by legislation.

Whereas, in the United States, the full possibilities that may be attained through well conceived consolidations, and mergers, are continually leading to important combinations, it may be said of Venezuela, that efforts in this direction have proceeded much farther—have proceeded so far, in fact, that there is no likelihood of there appearing on the markets of the world, any deluge of production from sources that might be out of sympathy with a general constructive policy.

The so-called independents in Venezuela are, in general, closely affiliated with the large operating companies, either through royalty, or working agreements, and there exists a general community of mutual interest that will go a long way toward keeping things on an even keel.

So much for the generalities of the situation. As to what to expect in the way of actual barrels of oil, the authors believe that some fairly reassuring predictions can be made.

It must be first admitted that the

enormous amount of capital poured into Venezuela during the non-productive pioneering years, when oil reserves as we now know them, were not even dreamed of, are entitled to a return from the world's market at least commensurate with the return expected on capital today being used in the United States to bring up oil which might for the present better be left in the ground. It will be recalled that when the Venezuelan developments started some 10 years ago, the world was seriously concerned about its future oil supply, and the venturesome prospectors, who assumed the costly and laborious risks of pioneering a new oil country, received the hearty encouragement of all concerned, including to a large degree, our own government. In those days Venezuela was vaguely looked upon as a possible source of oil, which it was hoped might prolong the lives of our flivvers for at least a few years beyond the dead line date for petroleum, so sagely prophesied by our scientists, and government agencies.

If then, Venezuela has a valid claim for participation in the world's oil business, what shall the extent of that participation be? The answer to this is, of course, a debatable matter, and one on which there can never be any full accord among American operators. It is believed, however, that the magnitude of the figures covering the cost of pioneering and initial developments, would convince an unbiased observer that Venezuela has certainly an ethical right to market the amount of oil it is now producing. As a practical matter, the question of ethical right will have no place in what the country will actually produce. At the present time, production is running at about 275,000 barrels a day. In all probability, 1929 will show a much smaller increase over 1928, than 1928 did over 1927, and a similar slackening in the rate of acceleration will doubtless continue for several years, or, until a resumption of a more rapid rate of increase is justified by the world's markets.

A number of factors will tend to prevent any very rapid increase after the end of the present year. The two principal ones seem to be the following:

FIRST: The Venezuelan operating companies have even larger interests in the United States, and the saturation point for Venezuelan crude will be reached, when any increased profit derived from an increase in Venezuelan output is counterbalanced by a loss on the American operations. No company will for long continue to increase profits by a few hundred thousand dollars a year, on a Venezuelan operation, at the cost of a few million dollars loss on its much larger American business. This saturation point is not far off.

SECONDLY: The large interests concerned in Venezuela are known to be planning a world-wide cooperative movement that can hardly fail to have a very helpful effect on the situation in general. These are reports to the effect that representatives of the world's leading oil companies have gathered in London and are at present in conference on a serious plan to alleviate the situation. One may be sure that the problem will be attacked from a world viewpoint, and in this perspective Venezuela is no more a disturbing factor than any other spot producing at the present time 275,000 barrels of oil a day. A far-reaching, constructive move toward the alleviation of present production ills is imminent, and the prophecy here hazarded is, that by the middle of next year, the prevalent concern with respect to Venezuela's production plans will be largely, if not entirely, removed.

Naturaline Co. Contributes To Airplane Fuel Tests

Staff Special

TULSA, Aug. 20

THE Naturaline Co. of America is cooperating with the Bureau of Standards in its present study of the vapor pressures of aviation gasolines, according to an announcement by D. E. Buchanan, vice-president of the Naturaline company and of the Chestnut & Smith Corp., an affiliated company.

The Naturaline company has contributed a fund which is being administered by the Society of Automotive Engineers. The money is to be used to pay the salaries of research associates engaged in this work.

Announcement of the new research project of the Bureau of Standards was made in the July 25 issue of NATIONAL PETROLEUM NEWS. It was stated at that time that the work was to be begun as quickly as apparatus could be gotten together to make the various flight and laboratory tests.

Government investigation of the natural gasoline airplane fuels such as Chestnut & Smith and affiliated companies have developed during the past two years of private research will be of the utmost value to the natural gasoline industry. Naturaline has been developed as a new product since government specifications for both domestic and fighting grades of aviation gasolines were adopted. At the time the specifications were adopted they represented the best thought of oil industry and automotive engineers.

Abundant proof has been brought out of private research in the past two years, however, to indicate that new specifications are desirable to include properly refractionated natural gasolines which have the merit of weighing much less than ordinary gasolines, giving quick starting and acceleration under all atmospheric conditions.

It is claimed for Naturaline that it will aid in maneuvering airplanes by enabling the pilot to climb more quickly because of the quickness with which motors may be accelerated.

The Chestnut & Smith Corp. and affiliated companies began developing its natural gasoline aviation fuel more than two years ago. Naturaline was developed to the point by mid-summer in 1927 that it was used in fueling all planes visiting Tulsa on the Ford reliability tour.

Before formal announcement of the fuel to fliers of the nation engaged in the tour, the manufacturers had conducted exhaustive series of tests at high altitudes and under extreme temperature conditions.

At the last annual convention of the Natural Gasoline Association of America much attention was given to the vapor pressure of gasolines, both those manufactured from crude oil and natural gasolines. It was developed that vapor pressure is the factor which controls gassing in the carburetors of motor cars and vapor lock.

It is expected that the present Bureau of Standards tests will bring out a great deal of information regarding the effect of vapor pressure on motor performance and set up standards with a proper safety factor so that fuels may be manufactured within the prescribed limits which will have the stamp of government approval.

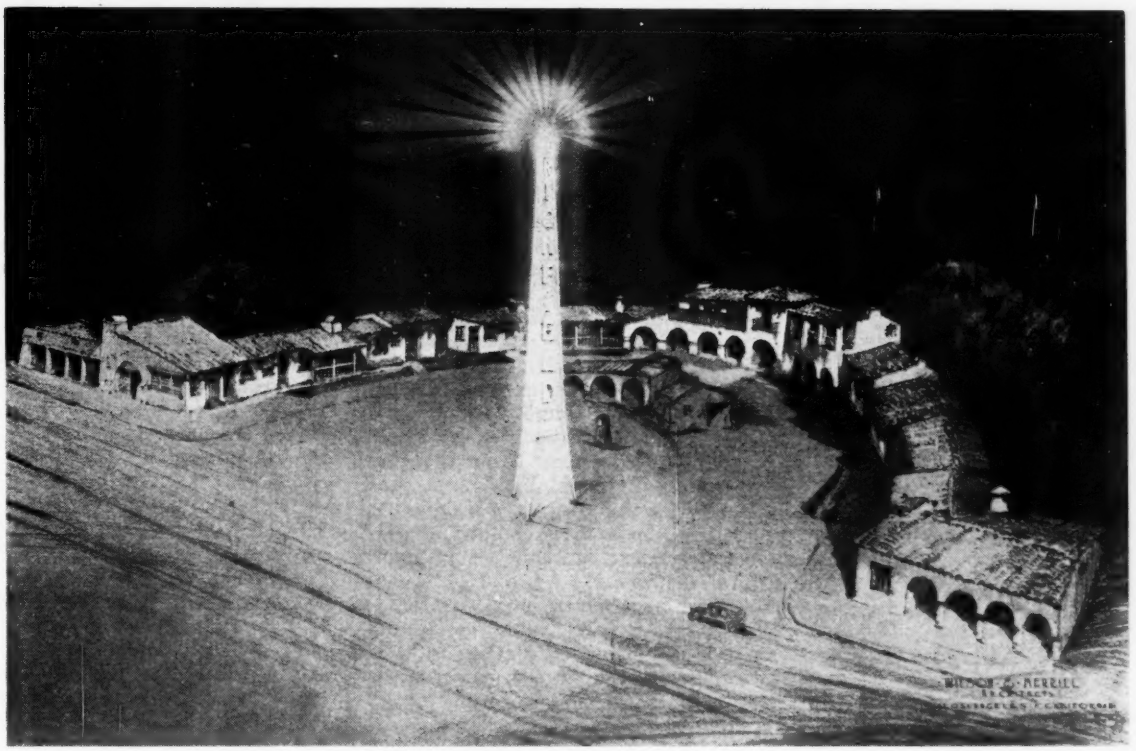
St. Louis Pool Extended

(By Telegraph)

TULSA, Aug. 20.—A 10,000-barrel well has extended the Wilcox sand area of the St. Louis pool in eastern Pottawatomie county, Okla., two locations to the south.

The well is the T. B. Slick No. 4 Hembree, in the SE SW SE of 19-7N-5E. Initial production of 350 barrels an hour came from the sand at 4158 feet to 4171 feet.

In the same pool the Independent Oil & Gas Co. 3 Younts in the NE SE same section, was deepened to a total depth of 4264 feet, the well responding with a production of 4345 barrels.



The architect's idea of what the Highway Community Inc. service station "communities" will look like. They will all be the same, located outside towns and cities on principal motor routes along the Pacific Coast. The gasoline station is in the front of the semi-circular group of buildings

Chain Stations De Luxe, By Highways, Are California Venture

By W. E. Green
N. P. N. STAFF WRITER

LOS ANGELES, Aug. 17 SERVICE "communities," located about 50 miles apart on motor highways, taking care of every need of the traveler by auto—and by air in some cases—are being planned along the Pacific coast.

Contract has been made with the Richfield Oil Co. to establish gasoline and oil stations at these "communities." The Richfield company is also arranging for the erection of towers with beacon lights for the guidance of travelers by air.

The "communities" will be of uniform Spanish architecture, offering the same services at each, at the same scale of prices. The services will include a hotel at each site, stores, cafe, garage—in short, everything that the traveler and his car may need.

Highway Communities, Inc., a newly formed company, is backing this new idea in service stations.

Sites for four stations have been selected, it is announced, at Capistrano Beach, about half way between Los Angeles and San Diego; Palm City, south of San Diego; Phillips Flying Field, one mile east of Beaumont; and Merced Air Field, near Merced. All these are in California.

Other stations of this type in California are announced for: Victoryville, Saugus, Bakersfield, Visalia, Tracy, Belmont, Chuala, Paso Robles, Santa Maria, Woodland, Orland, Redding, Yreka, between Santa Rosa and Healdsburg, Cummings, Trinidad.

Points in Oregon in which stations are being considered are Medford, Roseberg, Eugene, Salem, Hood River.

In Washington: between Olympia and Tacoma, Batel, Arlington, Wimachi and near Spokane.

The idea of these "communities" originated with Paul D. Howse, president of the Electrical Products Corp., holding the right to install Neon light signs in 11 western states in addition to Mexico.

Present plans call for the establishment of 30 stations up and down the Pacific coast, each facing directly a popular highway, all outside the limits of any city. In more than half the locations, air landing fields will be adjacent and convenient. Sites will consist of two to five acres of land. The gasoline station will be placed in the center of a semi-circle of buildings.

According to preliminary estimates each installation will cost approximately $160,000 and it is proposed that all units be operated by one concern, every unit giving service at the same prices. The tourist who stops at a chain hotel on the Mexican border will know exactly what the cafe price or room rental will be at the unit located near the Canadian border.

Each hotel will be the same in design and will consist of 28 rooms and two suites, in connection with a cafe and hotel office. Each room will have a bath.

NO TOURIST camp will be operated in connection with the "communities" and neither will any effort be made to provide landing fields for aviators. Every city near such a "community" is to be urged, however, to establish a flying field nearby.

California business men whose names have been given out as interested in Highway Communities are: Paul D. Howse, president of Electrical Products Corp.; John B. Miller, president, Southern California Edison

Co., Geo. P. Cochran, president Pacific Mutual Life Insurance Co.; Henry M. Robinson, president Los Angeles First National Bank; W. I. Hollingsworth, capitalist; Fred Curtis White, advertising expert and capitalist, among others. Officers have not been elected. Bert Heinly, formerly connected with First National bank, Los Angeles, will be connected with the concern in an executive capacity.

The Neon light tower will be 125 feet high, with some kind of symbol, to be decided upon on the advice of the United States Department of the Interior, on top as a guide to air traffic. The tower will be lighted from sunset to sunrise. The word "Richfield" will be placed on the tower in sufficiently large outlined letters to illuminate the immediate surroundings.

Shell of California Goes On 6-Day Week Basis

LOS ANGELES, Aug. 17.—Sept. 1 all employes of the Shell Co. of California in the oil fields and in refining plants will be placed on a six-day week basis and every employe who has been on the payroll of the company 12 months or longer will be granted a two-weeks' vacation each year with 12 days' pay.

An agreement was reached with the employes of the company at the annual meeting held at Santa Barbara late in July, but the memorandum of the agreement reached was not made public until recently.

Employes of the company are required to select representatives, and all disagreements or matters requiring adjustment are to be handled through this committee in direct contact with officials of the company. As a general rule, matters that can be held over are scheduled for discussion at the general meeting which is to be held annually in July.

It is especially stipulated that the membership in any labor union affiliated with the American Federation of Labor shall not be a bar to employment and it is not permitted that any employe holding such membership be discriminated against. The company does not deal with union representatives but deals entirely with its men through representatives of the employes direct.

A driller receives $10.79 for eight hours' labor while the bit dresser, is paid $8.46. Cat-head and derrick men are paid $8.17 and the rotary helper receives $7.29. Roustabout is classed as semi-skilled labor and is paid $5.25 a day.

The new scale of wages approximates the same pay for a six-day week as previously paid for a seven-day week.

Proration Test Under Way In Roberts-Settles Area

HOUSTON, Aug. 17

INSTEAD of taking hourly gages to obtain a basis for estimating daily potential production, as practiced in prorating the Yates and Winkler fields of West Texas, the Howard-Glasscock county advisory committee is making full 24-hour tests of all wells in the Roberts-Settles deep lime area.

Under field rules adopted no oil was to be produced or run from the Howard-Glasscock deep lime area until all wells were tested. Making the tests was delayed beyond the effective date of the railroad commission's prorating order, Aug. 15, because field facilities were inadequate for either testing the wells or running the 15,000 barrels daily allowable production set up as a maximum for the first month of prorating.

The roundly 20 wells in the area had been all shut in since completion and virtually no tankage had been built in the Roberts-Settles area. Neither had pipeline facilities been provided for running the oil.

Pipeline construction into the field is now under way by the Magnolia, Shell and Humble companies. The Magnolia will provide a short lateral connecting the area with its West Texas trunk system at Iatan, about 15 miles northeast of the field. Shell Pipeline Corp. is building an 8-inch spur into the field from its McCamey-to-Healdton trunk, a distance of about four miles.

The Humble has started right-of-way work for an 80-mile 8-inch line that will connect the territory with its West Texas crude concentration base at Kemper, Reagan county.

When these facilities have been provided, and short pipelines have been built to serve refineries under construction at Big Spring, on the Texas & Pacific railroad, northwest of the field, it will be possible to open production to the 25,000 barrels allowable after the first month of proration.

The Howard-Glasscock area, as previously reported in these columns, will be prorated on a basis of average potential production of deep wells where more than one has been drilled in the past on 40-acre units.

In the future, drilling will be limited to one well to each productive horizon below the 1800-foot pay on each 40 acres.

Shallow sand production of the so-called Chalk area, which overlaps the deep lime territory is not affected by the prorating order. Production from the unaffected shallow levels now averages about 5000 barrels daily.

Allowed production under the Winkler county order is now only 8.3 per cent of the indicated daily potential, as determined by hourly gages for use in the prorating yardstick. The total potential figures announced by the umpire for the Aug. 15-31 period reached the new high of 2,087,548 barrels. Actual daily withdrawals are limited by the prorating order to an average of 175,000 barrels daily.

As frequently pointed out, these theoretical potentials based on hourly gages do not at all represent daily exploitable quantities of crude. They cannot be used to measure with any degree of accuracy the open flow capabilities of a field.

Recognition of this caused the Pecos County Prorating Committee to withhold from the public the total potential production figures, based on hourly gages, for the Aug. 15-31 period in the Yates field. The committee announced only the average potential production of wells on the 100-acre units into which the field is divided for prorating purposes.

Yates field average potential production, as announced by the umpire for the Aug. 15-31 period, was set at 1,474,530 barrels daily. This figure compares with 65,000 barrels allowable production under the prorating order in effect.

Mission Pool Agreement Extended

TULSA, Aug. 21.—The Mission pool, prospective oil field just west of the Bowlegs field in Seminole county, Okla., will remain shut in for another 30 days, or until September 15.* This was decided at a meeting of operators and leaseholders in the area August 14.

The decision to continue the restrictions on the potential field was virtually reached a week previous, but it remained for the Marland Production Co. and the Minnehoma Oil Co. to accept formally the continuation of the shut-down. These companies hold acreage together and separately close to some of the wells which have been completed.

Production on these wells has been held even below the stipulated amount of 50 barrels per day. Feeling that even this amount of production was dissipating the gas pressure on the sand, the Minnehoma would refrain from developing its holding only on the condition that the wells were shut in entirely. Needing oil for its refinery, the Marland was inclined to drill up its acreage to gain the required production.

*National Petroleum News, August 1, page 28.

Accounting Methods for Refineries

Article Three

Preliminary Steps to Making Manufacturing Flow Chart

By Henry W. Ralph

THERE are certain preliminary matters which should be given attention before any far reaching changes are made in either refinery accounting systems or control of procedure.

Any individual who endeavors to initiate changes or pass approval on proposed changes must have a precise knowledge of the facts of the business. He must know what raw materials enter into the manufactured product, how they are received, handled and used, what form stocks and "in process" products take and the relationship of each to the complete operation.

It will be found advisable for anyone who is not thoroughly familiar with the entire routine (and not a waste of effort for one who is) to prepare a complete Manufacturing and Selling Flow Chart—one which gives adequate descriptions of all raw materials, supplies and intermediate products, as well as traces the individual product through each step until it passes out of the control of the organization.

In the making of a Flow Chart for many organizations in the petroleum industry, it will be found that the ultimate products are very numerous and that there is a need for groupings of products into classifications, and that the classification requirements in the plant are not the same as they are in the sales organization.

Product Designations

If it is possible to develop a classification with the same grouping for manufacturing and sales purposes it will be desirable to do so. It is not necessary that this be done and often it is not possible. The sales designation of a product will in general be most useful when it indicates the purpose for which a particular product is ordinarily used; and the plant designation must be particularly designed to facilitate the process of manufacturing. It will be necessary to use names which serve to make clear the destinction between "in process" stocks, which have or have not been subjected to some particular operation.

The most practical method will usually be to draw a line of demarcation in nomenclature at the time the products pass from the plant into storage as finished products or into the control of the sales department. This line of demarcation will be found equally helpful in the maintenance of a satisfactory organization control of stock, which subject will be discussed at greater length later.

The making of a complete Flow Chart will be helpful also in reaching a decision as to the most desirable breakdown of the organization Profit and Loss Statement. There will always be a demand for a breakdown by individual products, or classifications of products; a breakdown by plants and sections of plants; a breakdown by territories or geographical units; and often there is a demand for the breakdown of a territorial unit to individual products; or to special activities of individual units.

THE first step in presenting adequate information for the refinery executive, or department head, to use in guiding plant operations is a Manufacturing and Selling Flow Chart.

The designation of plant products, both finished and "in-process," for use in this and other phases of accounting work is taken up in this third article in this series of eight articles on Accounting Methods for Refineries appearing exclusively in NATIONAL PETROLEUM NEWS.

Later articles will illustrate a specimen flow chart and tell how it is made up and to what practical uses it is put in plant operations.

To produce them all would obviously be burdensome. The best solution will generally be to establish accounting lines which will produce currently those Profit and Loss Statements that are most important from the standpoint of responsibility of operation delegated to single individuals. For most organizations a Profit and Loss Statement for the plant will be most readily broken down by manufacturing operations, but it will be found not difficult to make a breakdown by products as well. In most cases a breakdown, either by process or by-product, will be possible only after normal or standard costs have been established. The use, wherever possible, of "opportunity cost for products" will develop a criterion that is more readily appreciated by operating individuals and is preferable because it is continuously current.

In the refinery a primary breakdown of the Manufacturing Profit and Loss Statement should, therefore, be made by using market prices for products for which published quotations can be obtained; and further analyzation of the manufacturing Profit and Loss Statements will be completed by the use of standard costs for processes.

The Trading P & L will naturally divide into classes of raw materials and products. The Sales Department P & L will be broken down first by type of distribution. If any type of distribution is readily separable into geographical territories which are under separate control, there will be an easy and logical breakdown by territories.

The important result obtained by the breakdown outlined above is that there will be available for the management a method of automatic control of operations more effective than can be obtained even by the most extended personal contact. There is made an automatic decision of the value, month by month, of each particular section of the organization; and those responsible for those sections are in position to develop a knowledge of and interest in operation which should stimulate them and make their efforts more and more profitable.

Need for Clear Classification

A fundamental requirement for organization accounting is a scheme of reports and records covering the receipt and disposition of raw materials, supplies and products so that a definite proof can be made that these have all been accounted for.

This must include an accurate opening and closing inventory, satisfactory and sufficient records of receipts, production, consumption and deliveries. This in turn involves a classification of all items of such scope that each item falls automatically into its proper place without confusion.

If, in the process of manufacturing or distribution, any item is identified differently at one stage than another, a quantity tie-up must be installed so that such variations in nomencla-

ture will not introduce additional complications which are difficult for the clerical staff to understand and handle; or produce a condition which is incapable of definite check. The proof of a successful classification is that the monthly process of summarizing operations automatically demonstrates in a simple manner that all quantities have been accounted for.

Benefit of Adequate Product Classification

By the establishment of a satisfactory classification and a clean-cut separation effective at the time shipment is made from the refinery, the total of refinery shipments can be classified in the manner which makes for most convenient comparison with refinery operating records; and this same quantity can again be summarized by classifications which are consistent with the handling of these products in the field.

If for each subdivision of the plant and the field an accurate control is in effect, and the transfers between subdivisions are accurately handled, it follows that the organization control of stocks will be satisfactorily taken care of.

Stock Control a Prerequisite in Accounting

To state that accounting must have its inception in adequate stock control seems so obvious that one may hesitate to write it—for surely one must account for all articles of value. Certain experiences, however, have made very clear that this field is sometimes ignored. One glaring instance is cited—where a well known and extremely capable professional man became financially interested in an oil company. He hired professional accountants to set up the proper records and make periodic reports. There was an adequate margin on which to operate but still no profits were made. Ultimately it was developed that the organization stock loss was simply beyond reason. That particular fact should have been the first fact developed instead of the last. Be sure to know exactly what your stock loss is, where it develops, and why.

For each department of the refinery and for all departments combined there should be developed for stated periods a reconciliation of stock. The total of the opening inventory and the receipts should be compared with the total of the closing inventory and the shipments or the transfers and the resulting stock gain or loss developed.

In most refineries there exist conditions which render the control of stock difficult. The first difficulty is the handling of stocks actually in process of distillation or treating. The only feasible method of handling this is to make a theoretical distribution to finished products of the product in process, or to consider it as a stock of the description in which it was classified before that particular treatment had started. The choice between these two alternatives will be made on the basis of the time element involved.

Regardless of the size of the refinery and the complexity of its operations it is good practice to have a single sheet of paper on which all of the operations for a period may be summarized. This sheet should show both opening and closing inventories, receipts and shipments, transfers between departments, production of each finished product and "in process" product, and the size and kind of all losses sustained in manufacturing, etc.

There will be difficulty in preparing a sheet of this kind for many refineries—because of the lack of adequate information covering transfers, or insufficient run-down tanks, lack of information concerning evaporation, processing and other losses. If such a sheet is actually prepared the first step will have been taken toward the development of those facts. With such a sheet it will be easier to visualize the minimum requirement of additional equipment necessary to give a genuine control of stock. More than that, it is essential for the development of a routine of least effort for forecasting the operation of the refinery.

A later article will illustrate a specimen production sheet which is suitable for a particular refinery. It is the purpose at this writing to show the real need for such a sheet and point out the benefits that may follow from its use.

Oil Credit Managers' Program

CHICAGO, Aug. 20.—Service station and bulk station credits will be discussed Sept. 6 in an address by C. D. Votrian, credit manager for Barnsdall Refineries, Inc., before the petroleum section of the National Credit Men's Association. The annual convention of the section will be held at the Palmer House, in Chicago, Sept. 4, 5 and 6. G. A. A. Schnee, credit manager of the Atlantic Refining Co., Philadelphia, will speak on granting credits upon sales of package lubricating oil.

"Can the credit man remake the policies of the petroleum industry?" will be answered by W. A. Ryan of the Mid-Continent Petroleum Corp., Tulsa.

"Procedure for opening a new account" will be told by Robert R. Cox, treasurer of Kanotex Refining Co., Arkansas City, Kan.

"What a financial statement should reveal" is the subject assigned W. C. Brown, of Producers & Refiners Corp., Denver.

"Effective methods of handling collections" will be described by J. F. McLaughlin, Indian Refining Co., Lawrenceville, Ill.

"Cost of carrying an account" will be shown in mathematical terms by W. J. Algiers, Transcontinental Oil Co., Tulsa.

"Credit terms on tank car gasoline" will be discussed by L. R. Cook, credit manager, Marland Refining Co., Ponca City, Okla.

"Decreasing credit limit to jobber on advancing market" will be discussed by E. F. Harrell, Deepwater Oil Refineries, Inc., Houston.

"How to handle branch and divisional credits outside the home office" will be told by H. R. Wakefield, Sun Oil Co., Philadelphia.

"How to ship more petroleum products and have fewer credit losses" will be told by Booker Linton, Lubrite Refining Co., St. Louis, and E. C. Claiborne, Derby Oil & Refining Corp., Wichita, Kan., in a pair of short discussions.

"Credit conditions for the coming year," will be discussed by M. S. Riglander, Phillips Petroleum Co., Bartlesville, Okla.

Coming Meetings

Petroleum Section, National Association of Credit Men, Palmer House, Chicago, Sept. 4, 5, 6.

Ohio Petroleum Marketers Association, Commodore Perry Hotel, Toledo, O., Sept. 5, 6, 7.

Wisconsin Petroleum Association, Wausau Hotel, Wausau, Wis., Sept. 12.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 19, 20, 21.

North American Gasoline Tax Conference, Peabody Hotel, Memphis, Tenn., Oct. 1, 2, 3.

National Safety Council, Petroleum Section, Hotel Pennsylvania, New York City, Oct. 1 to 5.

Big Four State Jobbers, Kansas City, Mo., Oct. 3, 4, 5.

American Oil Men's Association, Hotel Statler, Detroit, Mich., Oct. 9, 10, 11.

Wisconsin Petroleum Association, Green Room, Schroeder Hotel, Milwaukee, Oct. 17.

Petroleum Division, A. I. M. E. Tulsa, Oct. 18 & 19.

International Petroleum Exposition, Tulsa, Oct. 20 to 29.

California Natural Gasoline Association, Los Angeles, Nov. 13, 14.

Independent Oil Men of America, Stevens Hotel, Chicago, Nov. 19, 20 and 21.

American Petroleum Institute, Stevens Hotel, Chicago, Dec. 4, 5, 6.

Review of Late Production News

DOMESTIC production in this country increased 50,000 barrels daily average gross, for the week ending Aug. 18, according to the figures of the American Petroleum Institute. Total domestic production was 2,444,500 barrels.

The increase was entirely accounted for by gains in output in the Little River field of the Seminole district in Oklahoma, where a new form of operators' restrictive agreement went into effect Aug. 15.

Crude oil imports for the week, 246,700 barrels daily average, increased 75,000 barrels over the week before.

At 2,691,214 barrels daily average, total oil supply for the week ending Aug. 18 was 130,443 barrels larger than the previous week.

Winkler and Howard counties, in West Texas, both under proration, gained 10,350 barrels. Salt Creek, Wyo., dropped 8000 barrels, and Long Beach, Calif., 2000 barrels.

Oklahoma-Kansas

PRODUCTION in the Little River pool in the Seminole district in Oklahoma jumped from 43,238 barrels from 146 wells Aug. 11 to 101,625 barrels from 177 wells Aug. 18. The 31 new wells were inside locations drilled into the sand, under the terms of the operators' restricted drilling agreement, and were allowed to produce, from Aug. 15 on, at the rate of 1600 barrels daily from each 40-acre tract.

More wells are expected to be drilled in in this pool the next few weeks, but the agreement will probably hold production of the pool to around 100,000 barrels daily.

New wells in the St. Louis pool, one township west of the Little River field, are bringing production there up around 80,000 barrels, not much under present maximum pipe line capacity. The T. B. Slick, No. 4 Hembree, in the SE, SW, SE, 19-7N-5E, coming in at the rate of 10,000 barrels, extended the area two locations to the south. The sand was found at 4128 to 4171 feet.

Plans for the state-wide restriction of new flush drilling areas, including two or three pools outside the Seminole district, were discussed at a general meeting of Oklahoma operators Aug. 21.

Texas, New Mexico, Louisiana

Two flanks of the Roberts-Settles deep lime area, in Howard-Glasscock counties, Texas, appear to have been delimited for oil production by tests drilled to the north and south of earlier wells. Amerada Petroleum Corp. and Rycade Oil Co., drilling jointly in the southeast corner of Sec. 130, Block 29, found sulfur water at 3124-3126 feet. This is north of production. On the south side, in the northwest corner of the southwest quarter of Sec. 156, F.H.E. Oil Co. got sulfur water at 3070-3073 feet in its C-1 Roberts test.

Exploitation of Howard-Glasscock wells under a prorating order effective Aug. 15 was delayed because there was insufficient tankage in the field to make production tests and because pipeline facilities had not been supplied for handling the oil. Humble Pipeline Co., Shell Pipeline Corp., and Magnolia Petroleum Co. are building spur lines into the field and will provide outlet for the 15,000 barrels daily maximum allowable under the prorating order.

In the Yates field, Pecos county, where production is prorated on a basis of 65,000 barrels, allowable daily maximum, a number of wells have been deepened in the lime pay horizon to establish higher potentials and, thereby, gain greater percentages of market outlet.

Winkler development proceeds in the north end of the field, where occasional large wells are completed. These do not, however, affect total production limited under prorating machinery to 175,000 barrels daily.

In the northwest trend across the Texas-New Mexico boundary, in Lea county, New Mexico, most of the dozen and a half tests drilling are temporarily shut down for one reason or another.

The Boggy Creek salt dome, which straddles the Anderson-Cherokee county boundary, in east Texas, yielded its third deep flank producing well for the Humble Oil & Refining Co.

Gulf Coastal Texas and Louisiana completions were of the usual type, having little significance in their effect on the industry generally. Operations in north Louisiana were without feature.

California

The scramble to start as many new wells as possible continues in the Santa Fe Springs field in California, where three weeks ago the Wilshire Oil Co. well found a new sand, just above 6000 feet, yielding high gravity oil.

The total number of new operations in this field by Aug. 18 was 150 and it is possible that 300 new wells may be drilled here. It is not thought possible that production from any of these new wells can reach the market before well into December.

The discovery well is reported making 3500 barrels daily of 37 gravity oil and 3,000,000 cubic feet of gas.

Long Beach reported but six new wells making less than 6000 barrels total flush production.

Two new wells are to start for the deep sand at Seal Beach, but no increased drilling activity is expected there for several months.

Wyoming, Montana

E. H. Rosenberg and associates have what appears to be an oil well on the Frannie structure in northern Wyoming about 2 miles south of the Montana line. Embar sand was topped at 2585 feet and 2 feet in the sand the hole filled with oil. Location is in Sec. 25-58n-98w. Crude tests 29 gravity and is paraffin base. It will probably prove to be another black oil field in Wyoming.

Montana completions in the week include one at Banatyne and 2 at Pondera. The one completed at Banatyne, No. 1 Freeborn, by the C. L. Archer interests, at 1550 feet was given a light shot and the hole filled up 900 feet with crude. It will be put on the beam. Location is on Sec. 31-26-1e.

At Pondera there are now 10 producing wells with an aggregate production of about 1000 barrels. Oil is marketed through a short pipe line from the field to railhead at Conrad. The Pondera completions are the W. E. Rice well, No. 1 State, Sec. 16-27-4w, and the California Petroleum Corp.'s No. 1 Kingsbury, s.w.¼ Sec. 15-27-4w.

CASPER, Wyo., Aug. 18.—Work on The Texas Corp.'s new refinery at Cody is progressing rapidly. The company has opened offices in Cody and the work is in charge of Pendleton Beal, who was transferred from the company's works at Casper. Tracks have been completed into the grounds and switching tracks are all in along the Burlington right-of-way. Work is under way on the loading racks for both refined and crude.

Modern Oil Camps and Supply Depots Where Texas Outlaws Ranged

By Paul Wagner
N. P. N. STAFF WRITER

Article 2

ROMANTIC figures of outlaws and cattlemen whose names were famous in the early days of West Texas, grow more shadowy before the orderly oncoming of oil field development there.

Oil company camps bring a bustle of industry, and comforts for workers, both undreamed of by the scattered residents of the districts around the fields.

Perhaps, in later times, this story of the march of progress of the oil field workers, with their organizations, their supply trains, their commissary—all timed to the purpose of keeping the drills going—will be as clothed in romance in the telling as are now the stories of the famous outlaws who roamed the plains, the days when the man who was "quickest on the draw" told of the encounter.

Tucked away in some tumbledown shack, where tinned goods and soft drinks are sold the traveler, will still be found evidence of the days when bars flourished. The fixtures, more likely than not, will show bullet holes that date back to when some notorious frontier character "shot up" the town.

Whereas oil developments have already resulted in building up mushroom towns adjacent to the oil fields, the areas of wildcatting are so scattered over this vast area that they remain to be transformed. They are as of the old days.

It is such areas of isolation that still constitute the bulk of the salt basin region 500 miles east to west and 600 miles north to south.

Away from transcontinental highways, along which have been built such thriving cities as San Angelo and Midland, Texas, and Roswell and Carlsbad, New Mexico, natural conditions are similar in both states. If anything a little bleaker perspective may be found in southeastern New Mexico. Prospecting has been slower getting under way there and changes, therefore, have been delayed.

Comfortable hotels such as are found in most oil centers, are missing at Monument, Nadine and Jal, New Mexico, or Andrews and Seminole, Texas, where wildcatting operations proceed slowly but steadily.

True, one can get a decent meal at any of these settlements, but a comfortable bath means driving 80 or 90 miles into Midland or Carlsbad over monotonous trails.

MONUMENT, New Mexico, will serve as well as any other place in citing an example of a community as yet little disturbed by approaching oil developments. It may be the next to undergo a transformation, however, as two tests showing oil have been drilled by the Midwest and Empire companies, respectively, 12 to 15 miles north and west.[1]

Despite the sign on the Monument hotel, which promised "good home cooked meals at all hours," my traveling companion and I recently found it necessary to eat our midday meal at one of two stores there.

We had reached Monument at 11 a.m., Rocky Mountain time, which prevails on the New Mexico side of the state boundary. It was high noon in Texas, a scant 10 miles to the east, but where across the boundary was one to find any accommodations short of Andrews, 50 miles away, or Midland, which was our destination for the night?

Time does not mean much in such a country unless one has a destination at a fixed hour. A wait of an hour for the Monument hotel to open wasn't in our plans at all.

We found baked beans, canned plums and harmless Budweiser at one store. At another, across the road, we found cheese in moisture-proof wrappers. Thus, by foraging, we managed to subsist.

Another traveler, who professed a knowledge of the old days, told us as we ate that this was a part of the region made famous by the frontier-days exploits of "Billy the Kid." We speculated as we munched. Who knows but what the bullet holes in the back counter of the old bar were made by a gun in the hands of this selfsame ambitious youngster?

IT IS a long way, both in mental pictures and physical traveling, from the hotel at Monument to the very modern hostelries at Midland and Carlsbad. Time was, and not so many years ago, when the only first class stopping places between Fort Worth and El Paso, in Texas,

[1]See map, page 25, July 4, 1928, issue, NATIONAL PETROLEUM NEWS.

Panorama view of the town of Wink, in Winkler county, Texas, showing the new field in the background at the right. In the foreground is the Humble Oil & Refining Co.'s new camp, and warehouse, complete even to the tennis courts at the left

were the Grace at Abilene and the Llano at Midland.

The Grace and the Llano were show places of those days. Then, Abilene and Midland, were cities in comparison with the surrounding country.

If there was any hotel at all in the old days at Rankin, Texas, county seat of Upton county, and now gateway to the Yates field of Pecos county, it was such a structure as that still found at Monument.

Rankin today boasts, however, one of the most comfortable brick hotels, built on a hill near the Upton courthouse, to be found anywhere in west Texas. The Harlan House is modest, of course, in comparison with the Crawford hotels at Carlsbad, New Mexico, and Big Spring, Texas, also as contrasted with the $475,000 Scharbauer hotel at Midland. That doesn't relieve the fact, however, that one experiences a real thrill in stopping there, back among the comforts of civilization.

IN WINK, Pyote, Crane City and other oil field communities there has been considerable construction of what are known as "tin hotels," built of galvanized material. They have the advantage of being reasonably safe from fire, which in the past has claimed many lives in the oil country.

Comforts have been available, (but "try and get 'em") at the San Angelo hotels since that city became the gateway to the southern part of the salt basin region several years ago. It, like Midland and some of the other west Texas cities along transcontinental highways, was rated a metropolis in the old days.

Midland, before the coming of oil development in the territory for which it is a hub, probably boasted a total of between 2000 and 3000 souls. It wasn't to be sneered at, even then, for it had to its credit for years the greatest per capita wealth in the entire country. This is by reason of the fact that some 35 owners of vast cattle ranches, every one of them rated at more than a million dollars in tangible wealth, lived there.

The Scharbauer hotel, recently built and furnished by Mr. and Mrs. Clarence Scharbauer with money obtained from oil, is in a class by itself. Besides having everything that could be asked in modern conveniences it goes all the way to provide extra comforts for the oil man.

Mr. and Mrs. Scharbauer have given free use of a large room for the Midland Petroleum Club, cooperating with Paul V. Vickers, secretary of the Chamber of Commerce; and Leon Goodman, president of the Chamber of Commerce, who helped in furnishing it with billiard and pool tables.

The Midland Petroleum Club is officered by W. A. Yager, Prairie Oil & Gas Co., president; George H. Coates, Independent, vice president; George Vorbes, Texas Pacific Coal & Oil Co., secretary-treasurer.

When large-scale oil field development work is being carried on in regions where housing facilities are inadequate, there is nothing left for the oil companies to do but provide well arranged camps for their men and families.

Oil company camps sprang up rapidly when field operations gained headway in the Winkler, Crane and Pecos counties.

Camps took the place of oil field boom towns. At least, with a few exceptions, they made unnecessary and unprofitable the building of shack settlements of the "ragtown" type, for these were forced to look for business to transients and floaters, the oil company personnel being already provided for, which has not always been the history of new oil fields.

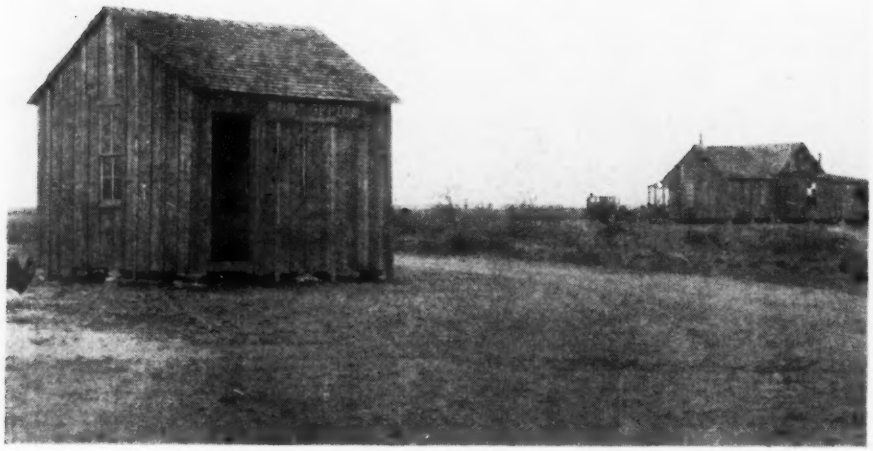
Along the two railroads that serve the West Texas salt basin region, the earlier hamlets have grown to the respectability of towns in many instances. These include such settlements as Big Lake, Rankin and McCamey, on the Kansas City, Mexico & Orient railroad, in the southern area; and Odessa, Monahans, Pyote and Pecos City, on the Texas & Pacific, in the northerly part of the basin. San Angelo, gateway to the general region on the south, and Midland, which occupies a similar position in the northern territory, classify as small cities.

Oil production of the region is generally found 20 to 30 miles distant, or more, from the railroads. Thus, the comforts resulting from the natural growth of towns along the railroads, more often than not, are denied the men whose time must be spent in the fields.

Anyone who has followed the oil country over a period of years knows how unsatisfactory the life of an extensive "ragtown" can be; how hangers-on and camp-followers help to multiply its evils and how the better class of workers seek employment elsewhere.

The building of company camps, therefore, becomes an investment; not merely a humanitarian measure smacking of paternalism. The camps in West Texas usually consist of two and three-room houses of the box type for workers and their families. Dormitories are generally built for the single men.

THE company camps in general are models of cleanliness and precision. The grounds are trim and flowers may be found growing in the yards when the hot winds of the west Texas desert permit vegetation



Post office at Monument, Lea county, New Mexico

to survive. They represent the nearest approach to home comforts the region in which they are located permits.

Many of the mistakes incident to camp construction in other oil fields are being avoided in this newer salt basin region. Adequate housing facilities are being provided, sufficient warehouse stocks to carry operations forward without delay are kept on hand and the full needs of individual company requirements are taken into account. But the wanton recklessness and disregard for expenditures which marked the building of "million dollar camps" at Ranger, ten years ago, for example, are being avoided.

Oil companies in their West Texas camps go the limit of actual needs for development, and for the comfort of their men, but no further. They have learned their lesson, as only experience can teach it.

The effect of prorating measures in the fields of West Texas has been to subdue the hum of such a development as a Smackover, a Ranger or a Burkburnett. As compared with total areas of future production, the West Texas fields are mainly being drilled conservatively; instead of under the hectic competition of slapping a well on every "inside" location, as well as along lease boundaries where they are required by offsets. The result is that smaller warehouse stocks are required for current operations and the number of men found necessary to carry on operations in the individual fields is much lower than would be the case otherwise.

Incidentally, with the sulfur crude of the region commanding a low posted price at the well—now 65 cents a barrel—it has been found desirable, where possible, to conserve crude stores underground until it becomes necessary, or desirable, to draw more freely on such reserves.

Besides, by keeping crude in its natural underground storage the industry profits from not being forced to construct additional millions of barrels of tankage, for avaricious corrosion to feed on.

(To be continued)

The $475,000 modern hotel built at Midland, Texas by Mr. and Mrs. Clarence Scharbauer from oil money

British Scientists Declare Ethyl Gasoline Safe

CLEVELAND, Aug. 20.—General use of Ethyl gasoline as a motor fuel involves no hazard to the public health that would justify barring it from sale in Great Britain.

This is the conclusion of a report made public by a committee of British scientists appointed by the crown to investigate the possible danger of the doped fuel to the public health. The report states that the committee, after its investigation, endorses the report made by the committee of seven appointed by Surgeon General Cumming of the United States Public Health Service in 1925.

This American committee which included some of the leading health authorities in the country, thoroughly investigated the matter, taking several months to carry out tests on chauffeurs, tank wagon drivers, filling station men, garage men and others. They found no evidence that danger to health had resulted from Ethyl gasoline, even where it had been handled and used by men daily for several years.

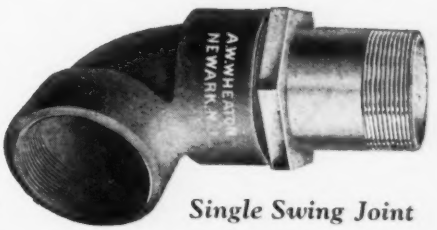
Sale of Ethyl gasoline was started in England several months ago by Anglo-American Oil Co., the Standard company in Great Britain. Sale of the anti-knock fuel was the target for virulent attack in parliament and in the newspapers, which brought about the official investigation.

West Texas Railroad Must Serve Wink

WASHINGTON, Aug. 18.—If the Texas & Pacific railroad is willing to build through or immediately adjacent to Wink, Texas, it may furnish railroad facilities for the Winkler county oil field. The Interstate Commerce Commission has granted a certificate of convenience and necessity authorizing the construction of a railroad line from a point on the Texas & Pacific known as Monahans to Kermit and thence to the Texas-New Mexico state line, about 35 miles at an estimated cost of $708,000.

When the proposal was made there was a scramble for the location of the line, the Kermit townsite company offering to furnish the right of way and $300,000 in cash. Wink, Pyote, Monahans and Kermit entered the scrap each desirous of assuring a location that would give it railroad service. The line as suggested by the Texas-New Mexico Railway Co. and sponsored by the Texas & Pacific, would not go near Wink, although it is the town through which the oil development material flows from the railroad at Pyote.

And in SWING JOINTS, *too*—



Single Swing Joint

it will pay you to get WHEATON Quality

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Installation of Wheaton Double Swing Joints; also, Wheaton Loading Valves and Wheaton Tank Truck Faucets.

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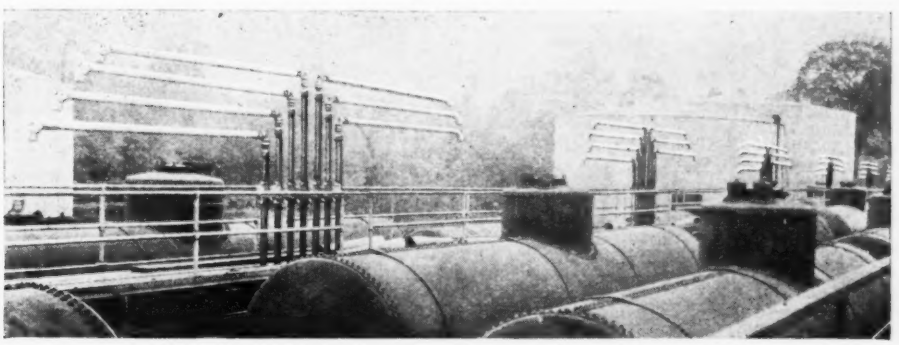
NOT only do Wheaton Swing Joints function with smoothness—not only do they reduce strains and leaks—they *continue* to do so long after ordinary joints have been cast into the junk heap. And this is due to the *material* from which they are made: Wheaton Swing Joints are ALL BRONZE—*tough, long-lasting* bronze, which *neither crystallizes nor corrodes.*

Just as Wheaton Faucets and Valves are famed throughout the industry for their *fine fit and finish*, so are Wheaton Swing Joints universally known as the finest *fitting* and the smoothest *swinging.*

Why not start *now* to *standardize* on Wheaton Swing Joints? You can secure *any size*, according to your need: 1", 1¼", 1½", 2", 2½", 3", 4"—large sizes for pipe lines, small sizes for curb pumps—single or double swing. Send for a sample, today. Give it your own test. If not entirely satisfactory, return it for credit or refund.



This view also shows an installation of Wheaton Double Swing Joints and Wheaton Loading Valves

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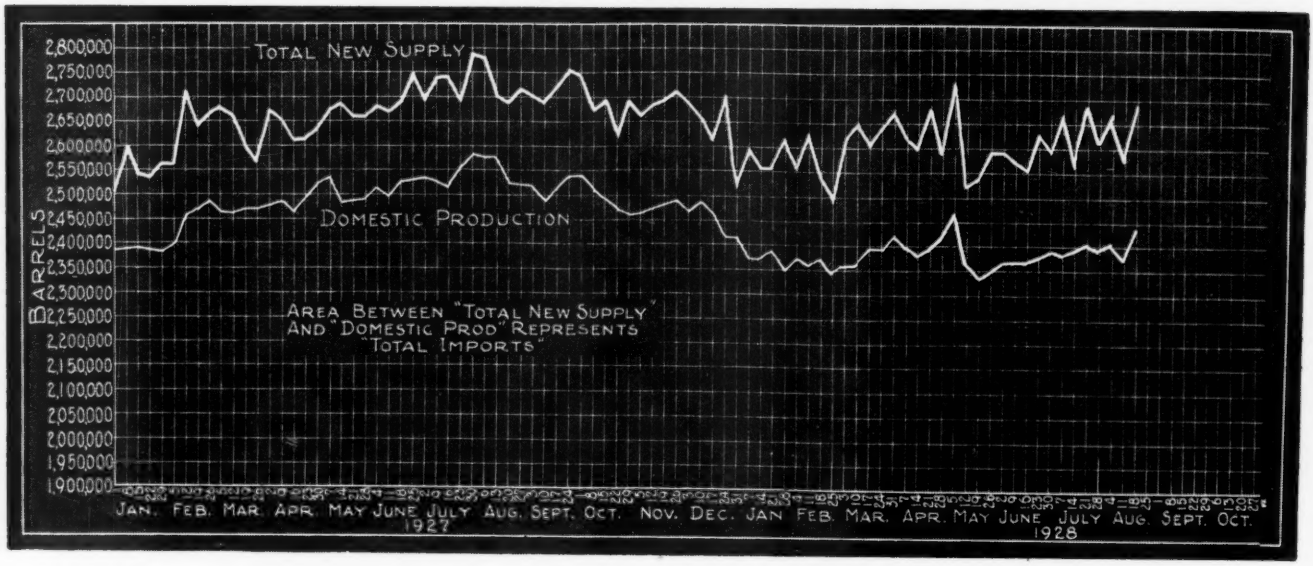
Empire Brass Mfg. Co., Ltd., London, Ontario, Canadian Manufacturers and Distributors

Wheaton

FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Aug. 18	Aug. 11
Production east of Rockies	**1,809,100**	**1,752,500**
Increase		**56,600**
Total production in U. S.	**2,444,500**	**2,389,200**
Increase		**55,300**
Crude oil imports	**246,714**	**171,571**
Increase		**75,143**
Total crude supply	**2,691,214**	**2,560,771**
Increase		**130,443**

OKLAHOMA

	Aug. 18	Aug. 11
North Braman	3,000	3,000
South Braman	1,450	1,450
Blackwell	3,450	3,450
Hubbard	2,600	2,650
Thomas	1,300	1,350
Tonkawa	13,050	13,100
Garber	8,250	8,350
Burbank	29,050	29,000
Osage, outside Burbank	26,800	26,950
Cushing	19,800	20,000
Yale Jennings	7,450	7,550
Davenport	1,900	1,900
Bristow-Slick	20,750	20,950
North Okmulgee	14,700	14,700
Pearson	3,500	3,750
Lyons-Deaner	5,800	5,850
St. Louis	63,550	50,600
Allen Dome	21,450	21,400
Cromwell	9,250	9,450
Papoose	4,150	4,150
Wewoka	5,650	5,650
Seminole	48,800	50,200
Bowlegs	54,800	55,950
Searight	13,350	12,850
Little River	90,950	45,300
Earlsboro	79,750	77,250
Duncan district	7,750	7,850
Graham	5,250	5,350
Fox	1,650	1,650
Healdton	14,000	14,100
Hewitt	9,650	9,700
Scholem Alechem	15,600	15,800
Others	53,000	53,350
Total, Oklahoma	661,450	604,600
Increase		56,850

KANSAS

Greenwood County	28,250	28,500
Florence-Covert	1,000	1,000
Peabody-Elbing	3,200	3,250
Eldorado-Towanda	12,800	12,850
Augusta-Fox-Bush	3,350	3,350
Rainbow Bend	1,550	1,550
Russell	3,850	3,950
Churchill	9,200	9,450
Oxford	10,150	10,050
Others	29,000	28,800
Total, Kansas	102,350	102,750
Decrease		400

NORTH LOUISIANA

Homer	4,350	4,350
Haynesville	5,950	5,950
Caddo, light	9,400	9,650
Caddo, heavy	3,250	3,150
De Soto, Red River	4,000	4,050
Elm Grove	550	600
Bellevue	750	750
Cotton Valley	4,500	4,550
Urania	6,850	6,850
Pleasant Hill	600	600
Total, North Louisiana	40,200	40,500
Decrease		300

ARKANSAS

El Dorado	5,250	5,250
Champagnolle	13,250	12,950
Smackover, light	7,400	7,550
Smackover, heavy	57,200	57,800
Stephens	1,050	1,050
Nevada	1,950	1,250
Lisbon	1,250	1,950
Others	100	100
Total, Arkansas	87,450	87,900
Decrease		450

TEXAS (Outside Gulf Coast)

Panhandle District

Hutchinson County	34,500	33,300
Carson County	6,700	6,700
Gray County	20,500	20,200
Wheeler County	700	950
Others	750	550
Total, Panhandle District	63,150	61,700
Increase		1,450

North Texas

Burkburnett	9,900	9,750
Electra	13,300	13,500
Iowa Park and K-M-A	3,800	3,900
Wilbarger	35,000	36,000
Archer County	20,200	20,350
Montague-Cooke	11,000	10,750
Others	650	600
Total, North Texas	93,850	94,850
Decrease		1,000

TEXAS (Outside Gulf Coast)

West Central Texas

Stephens County	7,100	7,000
Eastland-Desdemona	7,000	7,200
Brown County	11,950	12,100
Coleman County	3,500	3,450
Callahan County	3,600	3,500
Shackleford County	10,550	10,650
Young County	8,000	7,750
Throckmorton County	900	950
Palo Pinto County	450	450
Jack County	1,800	1,800
Others	600	600
Total, West Central Texas	55,450	55,450

West Texas

Jones County	1,800	1,700
Mitchell and Scurry Counties	3,100	3,200
Howard County	9,300	5,100
Reagan County	18,200	18,300
Crane and Upton Counties	61,300	62,600
Crockett County	3,050	3,200
Pecos County	68,700	67,750
Winkler County	177,000	170,250
Others	1,500	1,500
Total, West Texas	343,950	333,600
Increase		10,350

East Central Texas

Mexia	6,850	6,900
Currie	450	450
Richland	550	550
Wortham	1,650	1,700
Corsicana-Powell	10,400	10,500
Nigger Creek	1,000	1,000
Total, East Central Texas	20,900	21,100
Decrease		200

Southwest Texas

Luling	13,250	13,500
Lytton Springs	1,000	1,100
Somerset	700	700
Laredo District	8,700	8,800
Dale	1,200	1,150
Others	400	400
Total, Southwest Texas	25,250	25,650
Decrease		400
Total, Texas—(Outside Gulf Coast)	602,550	592,350
Increase		10,200

GULF COAST

Coastal Texas

West Columbia	7,950	8,150
Damon Mound	700	800
Big Creek	4,500	3,700
Boling	2,000	2,100
Blue Ridge	6,500	6,300
Pierce Junction	10,150	10,500
Humble	1,350	1,400
Goose Creek	6,800	6,800
South Liberty	3,800	3,600
Hull	10,300	11,800
Saratoga	1,000	1,050
Batson	1,400	1,400
Barber's Hill	600	600
Sour Lake	3,300	3,400
Spindletop	38,600	37,700
Orange County	3,600	3,700
Others	3,000	3,450
Total, Coastal Texas	105,550	106,450
Decrease		900

Central Louisiana

Vinton	4,400	4,450
Sulfur Dome	3,400	3,400
Lockport	3,650	3,450
Sweet Lake	4,100	3,950
Evangeline	1,050	1,100
East Hackberry	4,650	4,050
Edgerly	1,050	1,050
Sorrento Dome	1,100	1,100
Others	1,300	1,600
Total, Coastal Louisiana	24,700	24,150
Increase		550
Total Gulf Coast	130,250	130,600
Decrease		350

ROCKY MOUNTAIN

Wyoming

Salt Creek	30,000	38,100
Grass Creek	2,500	2,400
Elk Basin	950	950
Big Muddy	2,750	2,700
Lost Soldier	3,900	4,000
Rock Creek	2,750	2,700
Lance Creek	550	550
Others	7,350	8,350
Total, Wyoming	50,750	59,750
Decrease		9,000

Montana

Cat Creek	1,700	1,700
Sunburst	8,300	8,300
Others	100	100
Total, Montana	10,100	10,100

Colorado

Moffat (Craig)	750	1,150
Fort Collins	2,400	2,600
Florence	1,050	1,350
Others	3,300	2,900
Total, Colorado	7,500	8,000
Decrease		500

New Mexico

Table Mesa	350	200
Hogback	400	400
Artesia	1,100	1,100
Rattlesnake	950	1,050
Others	200	200
Total, New Mexico	3,000	2,950
Increase		50
Total, Rocky Mountain	71,350	80,800
Decrease		9,450

California

Santa Fe Springs	38,000	38,000
Long Beach	192,000	194,000
Huntington Beach	52,500	52,000
Torrance	17,700	17,700
Dominguez	11,000	11,000
Rosecrans	6,000	6,000
Inglewood	29,700	29,700
Midway-Sunset	74,500	74,500
Ventura Avenue	52,500	53,000
Seal Beach	31,000	31,500
Others	130,500	129,300
Total California	635,400	636,700
Decrease		1,300

Our Industry—A Page of Facts and Personalities

By Paul Wagner

Elmer M. Rice, micro-paleontologist in the Fort Worth offices of the Pure Oil Co., has been temporarily transferred to the El Dorado, Arkansas district.

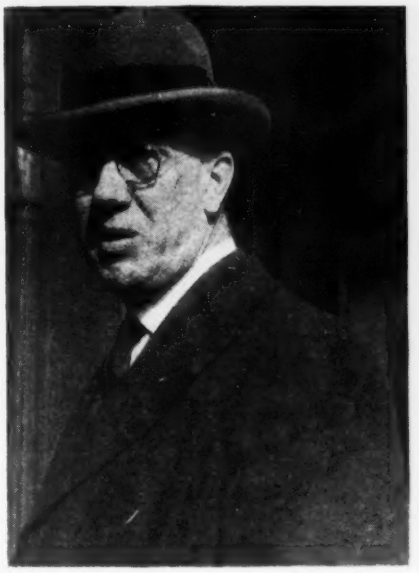
* * *

Detailed mapping of surface exposures of Permo-Carboniferous rocks in the southwest is being carried forward by committees working with Dr. C. N. Gould, of Norman, Okla., and Fred B. Plummer of Fort Worth. The work is under the more general direction of the Society of Economic Paleontologists and Mineralogists, largely made up of members of scientific staffs of various oil companies.

It is expected several years will be required to make new maps of the outcrops, provide better correlations of formations in states of the Mid-Continent region and describe type fossils fully. That the work will be of great value to the petroleum industry will be readily recognized when it is recalled virtually all oil production in north, central and west Texas comes from Permo-Carboniferous rocks, a condition that also applies largely to Oklahoma and Kansas.

The Society of Economic Paleontologists, affiliated with the American Association of Petroleum Geologists, is headed by Raymond C. Moore, state geologist of Kansas; the general committee including G. E. Condra, Nebraska; Frank C. Greene, northern Oklahoma; C. W. Tomlinson, southern Oklahoma; and Fred B. Plummet, Texas.

Included on the Texas committee are T. F. Newman, Midwest Exploration Co., and Paul Hunter, Marland Production Co., Abilene; C. Don Hughes, Empire Gas & Fuel Co., and John F. Ferguson, Amerada Petroleum Corp., Amarillo; C. W. Tomlinson, Schermerhorn Ardmore Co., W. C. Bean, Roxana Petroleum Corp., and George E. Burton, Humble Oil & Refining Co., Ardmore; E. H. Sellards, Bureau of Economic Geology, University of Texas, Austin; W. G. Wender, Amerada Petroleum Corp., Cisco; M. G. Cheney, Anzac Oil Corp., Coleman; Willis Storm, Pandem Oil Co., and H. B. Hill, United States Bureau of Mines, Dallas; J. W. Armstrong, Prairie Oil & Gas Co., Eastland; H. B. Fuqua, Gulf Production Co., and Ford Bradish, Fort Worth; Edgar J. Kraus, Atlantic Oil Producing Co., and J. W. Beede, Dixie Oil Co., Inc., San Angelo; F. K. Foster, Sinclair Oil & Gas Co., and Wallace Thompson, Wichita Falls.



Dr. Frank N. Speller, metallurgical engineer, National Tube Co.

Dr. F. N. Speller, metallurgical engineer in charge of research and specifications for the National Tube Co., Pittsburgh, has been identified with affairs of that corporation since 1901. He was chemist at McKeesport from 1901-1904, after which time he took up his present work.

Besides effecting improvements in methods of rolling and finishing steel tubes, Dr. Speller has devoted much time to the study of corrosion. He is the inventor of patented processes governing control of deterioration of pipe and equipment through corrosion. He has taken an active part in research and standardization work of the American Petroleum Institute and is the author of many technical papers.

Dr. Speller is also a member of the American Institute of Mining & Metallurgical Engineers, the American Society of Mechanical Engineers, the American Society of Heating & Ventilating Engineers, and the American Electro-Chemical Society.

After his graduation from the University of Toronto, Dr. Speller served as city chemist of Toronto from 1894-1896. He then went to the Carnegie Steel Co., at Homestead, Pa., remaining there until 1898. After a short time as a mining engineer in Alaska, in 1899, he served in 1900-1901 with the Bureau of Mines at Ontario, Canada.

* * *

R. V. Whitman is superintendent at Maturin camp of the Standard Oil Co. of Venezuela, subsidiary of the Standard of New Jersey.

The recent acquisition by the Moody-Seagraves interests of Houston of the E. L. Phillips utilities group companies in the southwest will bring no change in the operating personnel of the several enterprises. W. A. Raymond continues as general manager and has been made a vice-president of the parent organization.

* * *

Melbert E. Schwarz, chief engineer of the Rio Bravo Oil Co., Southern Pacific subsidiary, has returned to Houston headquarters after a honeymoon trip to the Pacific Coast. His bride was formerly Miss MacReed Dowlen of Houston.

* * *

W. B. Gathrell, driller for the Penn-Mex Fuel Co., in the Alamo district of northern Vera Cruz, Mexico, spent his vacation in Temple, Texas, in July.

* * *

Tom E. Cranfill, president of Cranfill & Reynolds, Inc., Dallas, has been spending a vacation with his family on the Pacific coast. Mr. Cranfill and his partner J. H. Reynolds, who makes headquarters at Cisco, Texas, have been among the most active Independent operators in the west Texas fields.

* * *

Carl Egner has been transferred from Tulsa to El Dorado, where he will make emergency purchases for the Arkansas division of the Pure Oil Co. The Arkansas territory will continue to be handled for general buying purposes through the purchasing department headed by J. W. Shields at Tulsa.

* * *

D. F. Allen, geologist, is representing the Amerada Petroleum Corp., in southeastern New Mexico, with headquarters at Roswell.

* * *

R. M. Baskin, formerly in the civil engineering department of Louisiana Oil Refining Corp., at Shreveport general offices, is now with the Venzuelan Gulf Oil Co., in South America.

* * *

The Mid-Continent Exploration Co., capitalized at $75,000, has been formed at Shreveport by Eugene G. Palmer, Bulow W. Martson, J. L. Keenan and Francis W. Scott. Mr. Palmer is president, Mr. Keenan vice-president, Mr. Martson treasurer, and Mr. Scott secretary.

* * *

J. B. Sweeney, formerly of the refinery accounting department of the Louisiana Oil Refining Corp., Shreveport, is now with the Beacon Oil Co., at Boston.

Compressor Runs on Recycled Air Mixture

Two compressors originally installed at Huconey Oil & Gas Co.'s discovery well, at Tiner's Corners, southwestern Jones County, Texas. Only one compressor was necessary for recycling operations and the other later was moved away

HOUSTON, Aug. 17

IN ADDITION to providing fuel for the air compressor installation, recycling operations have more than doubled the daily average production of the Tiner's Corner discovery well in southwestern Jones county, Texas, 17 miles northeast of Sweetwater.

The Tiner's Corner discovery, in Texas & Pacific block 19, sec. 13, settled down to 180-200 barrels, natural production, after a somewhat higher initial yield last June. Lack of pressure to flow the well, however, made air equipment desirable and one vertical type compressor was installed.

There was not enough gas present in the well to start the engine. It was necessary to use gasoline for starting and to get the well to flowing. This having been accomplished, the compressor is operated on the combustible mixture obtained by recycling air in the oil horizon.

The recycling method used eliminates fuel expense; only the cost of lubricants being charged to operation of the compressor equipment. Together the compressor and engine require about one gallon of lubricant daily.

No additional labor cost is charged against compressor operation by the Huconey Oil & Gas Co., of Abilene, owners of the well, as two men run tour on it, the same as on a pumping well.

Besides increasing daily production to around 430 barrels daily, the installation of air equipment has made the yield almost constant. For the first 23 days, according to a production check of the Clark Bros. Co., which made the compressor installation, the yield varied only from one to two barrels daily.

Flowing pressure of 65 pounds, pulling four pounds vacuum, has been used on the well, at a total depth of about 2500 feet. Use of air for flowing the oil has increased its gravity two points from 38.9 degrees to 40.9 degrees.

THE pay found in the Cisco series beds at 2500-2550 feet in the Tiner's Corner area is similar to the producing horizon of the Noodle Creek field, three miles south of the well and north of the Texas & Pacific railroad station at Trent. Wells in both areas lack sufficient gas pressure to make them flow for any considerable time after their completion.

Seven wells have now been finished in the Tiner's Corner area, including a second completion of the Huconey Oil & Gas Co., and Atkinson & Sandefer, its partner. The second Huconey-Atkinson-Sandefer well is No. 2, located 660 feet west of the discovery. It swabbed 62 barrels in a two-hour test at 2549 feet.

Other new completions include Phillips Petroleum Co.'s No. 2 Sharp, the second location east of the discovery, which came in flowing 12 barrels an hour; Roberts Oil Corp., and Cosden's No. 3 Grayson, which is rated a 600-barrel, initial production, well; and the Texas Co. and Cosden's No. 1 Laura Carter, diagonal offset northeast of the discovery, making about 250 barrels daily.

NEW YORK, Aug. 17.—Frederick G. Clapp has completed his engagement as Petroleum Engineer to the Imperial Government of Persia. He will continue his consulting practice and can be addressed as usual at 50 Church Street, New York City.

"Scotty" McNeill, Sweetwater, Texas, and G. J. McMasters, McCamey, Texas, both of Clark Bros. Co., snapped at the Huconey well

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Little River Output Is 102,000 Barrels Under New Restriction

By John Power
N. P. N. STAFF WRITER

TULSA, Aug. 18

THE Little River pool, member of the Greater Seminole group in Seminole County, Okla., which was crowded somewhat from the picture last week by the excitement in the St. Louis pool, again took its rightful place in the spotlight during the week ended Aug. 18.

Production from the Little River pool for August 11 was 43,238 barrels from 146 wells. Figures for August 18 show 101,627 barrels from 177 wells, many of which are pinched in, as the restriction of 1600 barrels per 40-acre tract is now in effect. It is estimated that about 20,000 barrels per day from the field is shut in by the agreement.

During the week 31 wells were added to the producing list, along with two failures on the west edge of the field, between Sec. 14 and 15, twp. 7-6.

The first of these dry holes, the T. B. Slick Inc. No. 2 Williams, in the SE NE of 15-7-6, had water in the Wilcox at 4304 feet, and the second, the Sinclair Oil & Gas Co. No. 1 Williams, in the SE of the same section, found water in the sand at 4347 feet. The Barnsdall Oil Co. has shut down its drilling wells in the SE NW NE and in the NE SW NE of Sec. 15.

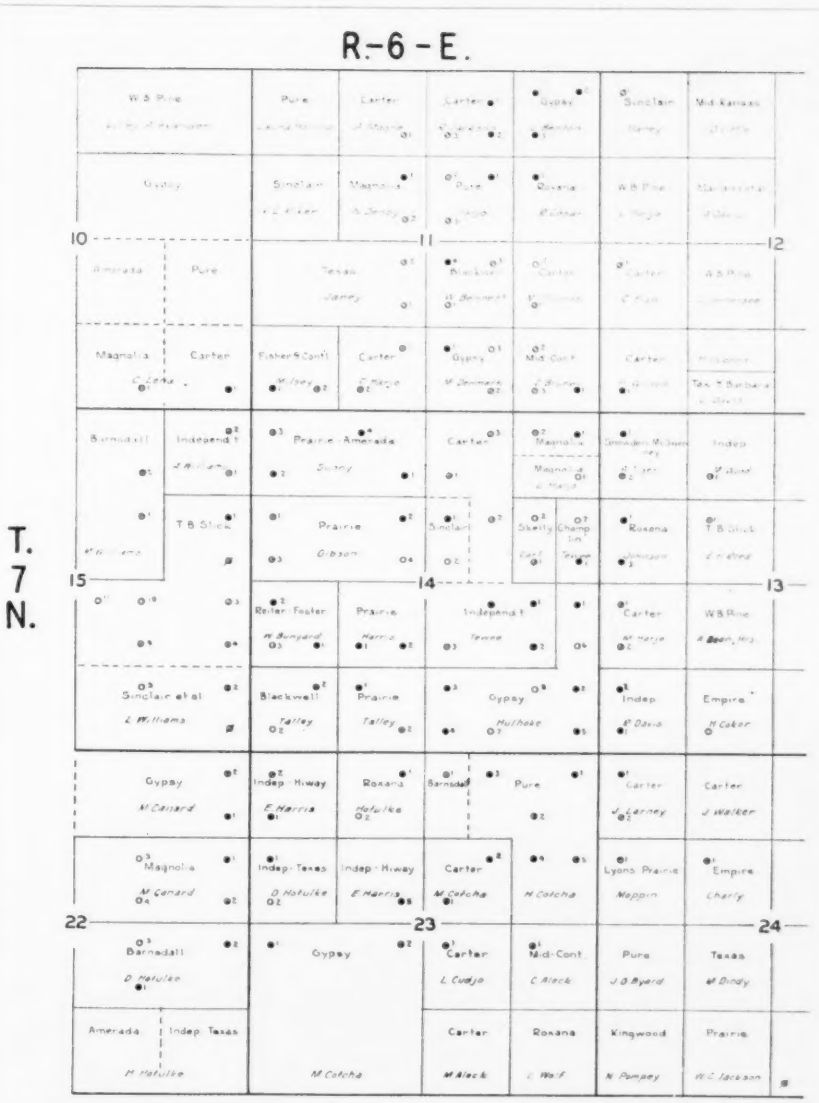
Scout reports from the field show that there are 116 drilling wells in the Little River restricted area, 48 of which are drilling below 4000 feet, 30 between 3000 and 4000 feet, and 18 not yet to the 3000-foot mark. Of the total there are about 100 which appear likely to produce.

Although August 15 marked the end of the three-day unrestricted period, wells which were delayed for one reason or another from reaching the sand at that time are allowed to come in and produce to capacity for three days, after which they must be shut in on the 1600 barrels per 40-acre plan. Although there will be a constant trickle of completions, the shutting in of about the same number of wells each day as their turn comes to be pinched in probably will keep the Little River production close to its present figure of 101,000 barrels daily.

The St. Louis pool, which made 65,206 barrels from 94 wells for the 24-hour period ended at 7 a.m. Aug. 18, added two more Wilcox wells to its roster during the week. These new comers were the Independent Oil & Gas Co. Nos. 2 and 3, Youts, located respectively in the SW NE SE, and the NE SE of 19-7-5. Top of the Wilcox sand in the No. 2 was 4160 feet, the total depth now being 4192 feet. The No. 3 well had the sand at 4247 feet, and has drilled in to 4262 feet.

Neither of these wells are anything like as big as the No. 1, but then few wells in Oklahoma are—for which many operators are duly grateful.

Production for the 24-hour period ended 7 a.m. Aug. 18 was as follows: Independent No. 1 Youts, 16,780 barrels; Independent No. 2 Youts, 3835 barrels; Independent No. 3 Youts 3795 barrels; Slick No. 1 Hembree, 7245 barrels; Slick No. 2 Hem-



Map of the restricted area in the south end of the Little River pool, Seminole county, Okla. Recent completions have more than doubled the production of the field during the past week. Perhaps the most important tests completed have been the two dry holes between sections 14 and 15.

bree 5985 barrels, and Magnolia No. 1 Hembree, 4805 barrels.

While these wells have not made any startling amounts of oil as yet, only one of them has really been drilled far enough into the sand to tell anything about its capacity. The No. 3 well has passed through but 15 feet of pay. It has been universally the case with this spot that the more sand drilled the bigger the production, so that it is not time yet to do any counting of unhatched chickens.

Provided there is pipe line capacity to take care of the oil there are several more wells in the field due to be drilled in soon. The Independent No. 4 Youts, in the NW SE SE of 19-7-5, is drilling at 3938 feet in the Viola lime, which was topped at 3880. The same company's No. 5, in the SW SE SE of Sec. 19, is running 5-inch casing at 4187 feet, in the Simpson, having topped that formation at 4117 feet. T. B. Slick No. 3 Hembree, NE SW SE of Sec. 19, made a flow of 165 barrels while drilling at 4078, while the No. 4 in the SE SW SE of the same section made 1015 barrels while drilling at 4115 feet.

The Prairie Oil & Gas Co. No. 1 Gammon, in the NW SW NW of 30-7-5 is reported to have a show of oil in Simpson at 4120 feet. This well, which is three-quarters of a mile south and a little west of the present production, has been consistently reported as high. It will be closely watched until it is completed.

The Mission pool, just west of the Bowlegs field in Seminole county, reported a failure during the week. The Gypsy Oil Co. No. 1 Sandy Baby had water in the Wilcox at 4547 feet. The test, in the SW NE of Sec. 6-8-6, will make a well in the Hunton, and will be plugged back to that horizon.

Little has been heard concerning the Sedgwick county, Kansas, wildcat which was discovered last week. Production of the well remains almost the same every day, being slightly in excess of 1700 barrels from about two feet of sand drilled.

Rush Still On for Locations to Drill In Santa Fe Springs Field

By W. E. Green
N. P. N. STAFF WRITER

LOS ANGELES, Aug. 18

THE race is still on to get the greatest possible number of wells spudded in at Santa Fe Springs in the shortest possible time.

It started when the Wilshire Oil Co.'s Buckbee No. 1 was completed about July 26 for approximately 2500 barrels of high gravity oil in a new sand found just short of 6000 feet.

Locations are being made so fast that the field scouts are lost in the scramble to keep track of them. Practically every location forces an offset and sometimes two.

On Monday, Aug. 13, there were 23 locations, 27 building rigs, 15 rigs, 25 rigging up, 2 idle rigs, 21 actively drilling new wells and 7 redrilling or deepening. A total of 120 operations ranging from locations to drilling wells.

By Friday, five days later, the total number of operations probably exceeded 150. On Monday the General Petroleum Corp. had 28 locations to rigs, on Friday 35. On Monday George F. Getty had 10 operations from locations to spudding, Shell Co. had 5, Associated 6, Standard Oil of California 14, The Texas Co. 17, Union Oil 9, Wilshire Oil 4 and Wilshire Annex 5. In addition a number of small operators each had from one to 3 operations under way. Almost every operator has added new locations since Monday.

Every supply house in Southern California is rushed filling orders. Steel derrick manufacturers are running 24 hours a day, and heavy drilling equipment is also moving in the same manner. Every experienced oil field worker has work for the asking. Demand for experienced drillers is almost acute. Four weeks ago a lot of oil field workers were without work and seeking employment in other lines, or leaving the state.

Much new oil is expected from the deep sand at Santa Fe Springs, but not to exceed 10 to 12 wells can be completed before early December. From that time on, completions will come faster as the wells now getting started will be reaching the final stage.

By Sept. 1 about 100 wells will be actually drilling and, during September, probably 100 more will be started. It is possible that, by Nov. 1, close to 300 wells will be drilling. Early in August only 302 wells were on production in the field, only three of which were flowing. Not to exceed 15 per cent of this number could be deepened to the lower zone.

The well which discovered the new deep zone at Santa Fe Springs, Wilshire Oil Co.'s Buckbee 1, was reported flowing at the rate of 3500 barrels daily this week, with a tubing pressure of 500 pounds and casing pressure of 1100 pounds. The production is cutting around 6 per cent and the well is making about 3,000,000 cubic feet of gas. The oil has an A. P. I. gravity of 37.

It is generally reported that the casing pressure of the well has climbed to about 1600 pounds and it became necessary to open up the flow bean to lower the pressure. Information concerning the well performance is only report, since the Wilshire company officials refuse actual information.

As has before been stated, average daily production in California will not grow as fast as might be expected with this extent of new drilling operations. Before Santa Fe Springs can hit its new stride, the average for the state is expected to drop to 610,000 to 620,000 barrels daily. No field other than Santa Fe Springs threatens a big increase in production. It is thought that California can start the new year with daily production close to present figures, about 636,000 barrels.

Again, last week, Long Beach production shows a decline, as only 6 wells were completed, with total flush production of less than 6000 barrels. Approximately 185 wells are still drilling in this field; but many of them are in trouble, water is showing up in others, and for various other reasons their completion schedule is shot full of holes.

Ventura Avenue will not show a decrease in production but the increase will not be large. The program of holding back the producing wells to 80 per cent of the ordinary production will be continued.

There will not be to exceed two producers by the end of the year at the new Elwood Terrace field. The discovery well is holding up at 2500 barrels of about 38 gravity oil with a heavy gas pressure and the second well was spudded this week, some 6000 feet east of the first producer, almost on the extreme east end of the large tract.

Rio Grande and Barnsdall, joint owners of the well and the large lease upon which it is situated, have sold off several tracts to other oil companies, thus reducing their total acreage to close to 900 acres. They still hold what is to be the best part of the structure.

Two new wells at least will be started in the old Seal Beach field

within two weeks, to be drilled into the zone just below the Selover sand; but at present it is doubted if any additional wells will be started in this area until these two wells are completed. If the two new wells do not show up unusually well, not to exceed two more will be started.

The plan of Petroleum Securities Co. to drill into the deeper zone at Inglewood also may not develop a situation as bad as at first thought. Its officials notified interested companies that at least one deep well would be drilled, but other companies are in hope that this one deep test will not be placed on production in the lower zone, known to be slightly below 3000 feet.

Drilling operations at Huntington Beach are at a low ebb and will show little increase, although a deep sand is thought to be present and waiting for the drill. If Santa Fe Springs had not become so active, more drilling could have been expected at Huntington Beach. Drilling is also at a low ebb in other sections of the state, without as many wildcats drilling now as was the case six months ago.

The higher prices posted for refinable crude oil 21 gravity and above will have a limited effect on drilling activity. The rush at Santa Fe Springs would have continued regardless of the price paid for the oil. Long Beach operators are getting more money for their production but the higher prices are having no effect on field activities.

Third Flank Producer At Boggy Creek

HOUSTON, Aug. 18.—The Humble Oil & Refining Co.'s third deep flank producing well on the Boggy Creek salt dome, which straddles the Anderson-Cherokee county boundary in east Texas, was estimated good for 2000 barrels daily at the end of the week.

The well, No. 2 on the Tom Jones tract, in the D. Roberts survey, found sand at 3715-3728 feet early in the week and produced for a few hours at the rate of 10,000 barrels daily. Later, it flowed 90 barrels an hour through ⅛-inch choker, but failed to maintain its production. Still later, its performance was considered improved.

Humble's No. 1 Lizzie Smith discovery, northeast of No. 2 Jones, on the southeast flank of the Boggy Creek dome, tested 4200 barrels, initial production, at 3732 feet, about a year and a half ago. It soon went "dead" and since that time has pumped nominal quantities of oil daily. The Humble's No. 2 Mandelstam, northeast of the discovery, is now making 390 barrels of fluid daily through ¼-inch choker, 30 per cent b.s. and water.

A total of about 20 wells, both deep and shallow, have been drilled by the Humble on the Boggy Creek dome, which it controls jointly with Rio Bravo Oil Co., subsidiary of the Southern Pacific railroad interests.

LOS ANGELES, Aug. 17.—R. E. Playter, formerly connected with the head office of C. F. Braun Co., Alhambra, California, has been transferred to the company's Tulsa office as manager.

Seminole District Production by Companies and Leases, August 15 and August 8, 1928

BOWLEGS

Company	Farm	Location	Aug. 15 Well	Aug. 15 Prod.	Aug. 8 Well	Aug. 8 Prod.
Amerada	Roscoe	15-8-6	8	1,245	8	1,290
Atlantic	Baker	1-8-6	4	534	4	450
Atlantic	Fleet	23-8-6	3	319	3	170
Atlantic	Grayson	13-8-6	4	864	4	715
Atlantic	A. Jones	16-8-6	2	85	2	70
Atlantic	C. Jones	9-8-6	2	102	1	120
Total Atlantic			15	1,904	14	1,525
Barnsdall	McNac	28-8-6	1	20	1	17
Barnsdall	Murrow	11-8-6	4	664	4	684
Total Barnsdall			5	684	5	701
Carter Oil	Bowlegs	15-8-6	4	1,145	4	1,165
Carter Oil	Burden	23-8-6	2	40	2	80
Carter	Harjoche	14-8-6	6	600	6	520
Carter	Hilly	23-8-6	3	725	3	710
Carter	Jones	11-8-6	4	675	4	640
Carter	McGeisey	21-8-6	1	10	1	10
Carter	Micco	8-8-6	1	300	0	0
Carter	Walker	15-8-6	4	530	4	520
Carter	Wise	23-9-6	11	1,585	11	1,745
Total Carter			36	5,610	35	5,390
Dixie	Culley	11-8-6	1	85	1	95
Empire	Lacy	14-8-6	6	470	6	458
Empire	Wise	23-8-6	2	327	2	317
Total Empire			8	797	8	775
Gypsy	Baby	6-8-6	1	32	1	0
Gypsy	Bowlegs	22-8-6	1	205	1	220
Gypsy	Barkus	6-8-6	1	25	1	1,292
Gypsy	Bradley	9-8-6	1	2	1	2
Gypsy	Cumsey	10-8-6	4	677	4	810
Gypsy	Doser	7-8-6	1	25	1	100
Gypsy	Grayson	13-8-6	4	422	4	287
Gypsy	Harjoche	10-8-6	3	565	3	1,080
Gypsy	Henderson	13-8-6	1	2	1	2
Gypsy	Jones	11-8-6	1	87	1	87
Gypsy	Mission	5-8-6	1	25	1	50
Gypsy	Mosar	1-8-5	1	25	1	50
Gypsy	Walker	15-8-6	7	1,240	7	1,220
Gypsy	Wise	23-8-6	2	170	2	145
Total Gypsy			29	3,502	29	5,377
I. T. I. O.	Barnett	24-8-6	2	339	2	339
I. T. I. O.	Barnett "B"	23-8-6	1	177	1	167
I. T. I. O.	Billington	22-8-6	5	463	5	457
I. T. I. O.	Bowlegs	22-8-6	10	1,576	10	1,566
I. T. I. O.	Davis	13-8-6	4	1,006	4	1,011
I. T. I. O.	Fay	13-8-6	9	2,034	9	2,071
I. T. I. O.	Goforth	15-8-6	12	1,350	12	1,130
I. T. I. O.	Livingston	15-8-6	10	2,297	10	2,561
I. T. I. O.	Lizzie	13-8-6	3	484	3	291
I. T. I. O.	Walker	15-8-6	8	1,011	8	898
I. T. I. O.	Williams	12-8-6	1	178	1	172
I. T. I. O.	Wilmott	15-8-6	4	323	4	226
I. T. I. O.	Work	24-8-6	1	119	1	118
I. T. I. O.	Youngblood	24-8-6	2	91	2	27
Total I. T. I. O.			72	11,448	72	11,034
Magnolia	Davis	13-8-6	3	456	3	500
Magnolia	Davis—M	13-8-6	1	232	1	234
Magnolia	Hammond	10-8-6	7	848	7	849
Magnolia	Rhodes	12-8-6	6	2,408	6	2,194
Magnolia	Van Buskirk	9-8-6	1	185	1	161
Total Magnolia			18	4,129	18	3,938
Marland	Maines	7-8-6	1	50	1	0
McCulloch	Bowlegs	22-8-6	2	305	2	345
Mid-Continent	Baker	10-8-6	4	743	4	763
Mid-Continent	Bowlegs	22-8-6	1	2	1	5
Mid-Continent	Smith	12-8-6	6	445	6	420
Total Mid-Continent			11	1,190	11	1,188
Minnehoma	Bowlegs	15-8-6	4	305	4	351
Prairie	Gahagan	23-8-6	4	425	4	350
Prairie	Harber	10-8-6	8	2,725	8	2,360
Prairie	Jones	11-8-6	4	500	4	445
Prairie	Templeton	12-8-6	6	1,685	6	1,665
Prairie	Whitney	23-8-6	4	740	4	765
Total Prairie			26	6,075	26	5,915
Pure Oil	Reed	14-8-6	14	3,774	14	3,577
Pure Oil	Strother "D"	11&14-8-6	4	404	4	344
Pure Oil	Strother "F"	10-8-6	7	2,075	7	2,189
Total Pure Oil			25	6,253	25	6,110
Roxana	Taylor	16-8-6	5	38	5	132
Shaffer	Lacy	14-8-6	3	260	3	313
Sinclair	Bowlegs	22-8-6	1	15	1	15
Sinclair	Cumsey	10-8-6	4	1,686	4	1,800
Sinclair	Ellen	11-8-6	7	917	7	935
Sinclair	Harjo	14-8-6	3	1,020	3	807
Sinclair	Jones	9-8-6	7	533	7	905
Sinclair	Taylor	10-8-6	4	1,767	4	1,713
Sinclair	Taylor-W	10-8-6	3	780	3	758
Sinclair	Walker	22-8-6	4	640	4	450
Total Sinclair			33	7,358	33	7,383
Slick	Jones	3-8-6	1	508	1	538
Texas	Reed	14-8-6	11	1,550	11	1,505
Tidal	Grayson	13-8-6	4	360	4	260
Tidal	Harjoche	10-8-6	6	1,695	6	1,615
Total Tidal			10	2,055	10	1,875
Twin State	Hays	8-8-6	1	995	1	50
Twin State	Jones	11-8-6	3	3	2	10
Total Twin State			4	998	3	60
Total Bowlegs			328	56,349	325	55,840

EARLSBORO

Company	Farm	Location	Aug. 15 Well	Aug. 15 Prod.	Aug. 8 Well	Aug. 8 Prod.
Amerada	Anderson	15-9-5	2	784	2	815
Amerada	Cowden	4-9-5	7	1,410	7	1,563
Amerada	Rogers	3-9-5	2	333	2	331
Total Amerada			11	2,527	11	2,709
Atlantic et al	Foreman	18-9-5	1	155	1	150
Barnsdall	Brown	10-9-5	4	2,425	4	2,629
Barnsdall	F. Bruner	2-9-5	2	623	2	797
Barnsdall	N. Bruner	10-9-5	3	1,172	3	1,384
Barnsdall	Cudjo	14-9-5	1	25	1	25
Barnsdall	D. Davis	11-9-5	3	181	3	269
Barnsdall	J. Davis	11-9-5	4	1,220	4	1,206

(Continued on Page 42)

Seminole District Production by Companies and Leases, August 15 and August 8, 1928

(*Continued from Page 41*)

Company	Farm	Location	Aug. 15 Well	Aug. 15 Prod.	Aug. 8 Well	Aug. 8 Prod.
Barnsdall	M. Davis	11- 9-5	3	21	3	71
Barnsdall	Gibson	9- 9-5	8	2,375	8	2,321
Barnsdall	Hern	15- 9-5	1	2	1	2
Barnsdall	Ingram	1- 9-5	8	1,129	8	1,403
Barnsdall	Pack-S	10- 9-5	4	184	4	147
Barnsdall	Peter	10- 9-5	4	119	4	127
Barnsdall	Sango	1- 9-5	4	4,429	4	4,579
Barnsdall	Sebolka	15- 9-5	1	320	1	211
Barnsdall	H. Sullivan	11- 9-5	1	0	1	10
Barnsdall	Sull-Harjo	10- 9-5	2	35	2	42
Barnsdall	Watsutke	12- 9-5	4	1,036	4	870
Total Barnsdall			57	15,296	57	16,093
Burk-Greis	Wisner	6- 9-6	1	1,950	0	0
Carter	Davis	13- 9-5	2	180	2	960
Carter	James	6- 9-6	1	40	1	45
Carter	Sango	1- 9-5	4	435	4	415
Total Carter			7	655	7	1,420
Continental	Kays	2- 9-5	2	50	2	85
Continental	Spencer	12- 9-5	4	1,340	4	1,160
Total Continental			6	1,390	6	1,245
Empire	Barker	12- 9-5	1	75	1	...
Empire	Edmundson	3- 9-5	3	140	3	138
Total Empire			4	215	4	138
Gypsy	Bruner	10- 9-5	4	3,032	4	2,832
Gypsy	B. Carter	11- 9-5	9	3,945	9	4,377
Gypsy	Earl	16- 9-5	1	18	1	17
Gypsy	Hunick	5- 9-5	1	2,030	1	2,127
Gypsy	Noble	12- 9-5	4	2,097	4	2,250
Gypsy	Peter	10- 9-5	3	342	3	352
Gypsy	Sango	1- 9-5	9	6,555	8	4,820
Gypsy	State	16- 9-5	4	910	4	782
Total Gypsy			35	18,929	34	17,557
Independent	Bruner	10- 9-5	3	300	3	145
Independent	Sullivan	10- 9-5	2	22	2	32
Independent	Knapp	8- 9-5	3	1,940	3	1,945
Indep.-Margay	Gaines	11- 9-5	4	650	4	635
Total Independent			12	2,912	12	2,777
Magnolia	Bryant	9- 9-5	6	473	6	432
Magnolia	Cowden	4- 9-5	4	40	4	38
Magnolia	Dixon	12- 9-5	1	28	1	30
Magnolia	Edmundson	3- 9-5	3	20	3	21
Magnolia	Holmsley	11- 9-5	7	642	7	611
Magnolia	Hyde	13- 9-5	1	1,624	1	1,584
Magnolia	Ingram	10- 9-5	1	28	1	25
Magnolia	Lena	10- 9-5	3	56	1	56
Magnolia	Seay	12- 9-5	9	2,122	9	3,275
Magnolia	Simpson	10- 9-5	3	42	3	90
Magnolia	Sparks	11- 9-5	7	877	7	913
Magnolia	Sullivan	12- 9-5	3	80	3	100
Total Magnolia			48	6,032	48	7,175
Mid-Continent	McCumber	9- 9-5	7	95	7	100
Mid-Kansas	Anderson	14- 9-5	3	85	3	75
Phillips	Dunnaway	14- 9-5	1	25	1	25
Prairie	Baker	24- 9-5	1	50	1	50
Prairie	Davis	13- 9-5	5	3,250	5	3,095
Prairie	C. Graham	3- 9-5	2	25	2	15
Prairie	O. Graham	10- 9-5	4	1,235	4	1,385
Prairie	Stidham	11- 9-5	13	2,815	13	2,905
Total Prairie			25	7,375	25	7,590
Roxana	Bayliss	17- 9-5	1	14	1	14
Roxana	Hearn	13- 9-5	1	143	1	234
Roxana	Spencer	12- 9-5	2	1,471	2	1,251
Total Roxana			4	1,628	4	1,499
Shaffer	Clark	1- 9-5	3	575	3	585
Sinclair	Foreman	18- 9-5	1	15	1	15
Sinclair	Hollins	12- 9-5	1	35	1	50
Sinclair	Sango	2- 9-5	4	3,300	4	3,540
Total Sinclair			6	3,350	6	3,605
Skelly	Sherry	6- 9-5	2	3,204	1	3,308
Skelly	Spencer	12- 9-5	1	377	1	459
Total Skelly			3	3,581	2	...
Superior	Ingram	1- 9-5	2	1,034	2	372
Superior	Walker	2- 9-5	2	3,377	1	3,431
Total Superior			4	4,411	3	3,803
Texas	Anderson	2- 9-5	8	435	8	575
Texas	Brown	10- 9-5	8	225	8	330
Texas	Rogers	5- 9-5	4	2,655	4	2,595
Texas	Wilmott	10- 9-5	7	545	7	550
Texas	Walker	35-10-5	1	520	0	0
Total Texas			28	4,380	27	4,050
Tidal	Watkins	9- 9-5	7	3,040	7	3,015
Twin State	Barker	12- 9-5	2	77	2	56
Twin State	Hern	2- 9-5	4	340	4	350
Total Twin State			6	417	6	406
TOTAL EARLSBORO			279	79,023	275	77,784
LITTLE RIVER						
Amerada	Nitey	2- 7-6	3	1,420	3	1,405
Amerada-Wilcox	Fore	35- 8-6	2	365	2	390
Total Amerada			5	1,785	5	1,795
Barnsdall	Hotulke	22- 7-6	2	3,446	1	32
Blackwell	Bennett	11- 7-6	3	5,455	3	1,585
Blackwell	Nitey	35- 8-6	6	1,764	6	2,225
Total Blackwell			9	7,219		
Carter	Fish	36- 8-6	6	355	6	880
Carter	Jackson	11- 7-6	3	3,585	3	3,555
Carter	Larney	24- 7-6	1	920	1	100
Carter	Moore	11- 7-6	1	2,350	1	2,325
Carter	Wilson	12- 7-6	1	1,600	1	100
Total Carter			12	8,810		
Champlin	Tewee	14- 7-6	1	0	0	0
Continental	Cosar-M	25- 8-6	1	185	1	85
Continental	Cosar	36- 8-6	5	1,385	5	1,240
Total Continental			6	1,570		
Gypsy	Brown	33- 8-6	1	2,545	1	2,640
Gypsy	Campbell	33- 7-6	2	182	2	200
Gypsy	Conard	22- 7-6	1	0	1	100
Gypsy	Cosar-M	25- 8-6	2	20	1	20
Gypsy	Cosar-W	36- 8-6	2	457	1	370
Gypsy	Cotcha	23- 7-6	1	1,802	0	0
Gypsy	Denmark	11- 7-6	1	0	1	100
Gypsy	Hulhoke	14- 7-6	5	9,666	1	100
Gypsy	Mungee	1- 7-6	1	25	1	25
Gypsy	Pottie	35- 8-6	4	885	4	1,120
Gypsy	Renton	11- 7-6	3	1,980	3	2,035
Total Gypsy			23	17,562		
Indep.-McCulloch	Davis-L	2- 7-6	3	1,450	3	1,520
Independent	Harris	23- 7-6	2	575	2	200
Independent	Tewee	14- 7-6	2	6,100	0	0
Total Independent			7	8,125		
I. T. I. O.	Campbell	1- 7-6	1	257	1	267
I. T. I. O.	Dugan	35- 8-6	3	1,296	3	1,350
I. T. I. O.	House MA	1- 7-6	1	30	1	41
I. T. I. O.	House WE	1- 7-6	1	37	1	64
I. T. I. O.	House B	2- 7-6	4	1,339	4	1,410
I. T. I. O.	Hull	26- 8-6	2	1,174	2	1,441
I. T. I. O.	Jackson	1- 7-6	3	1,033	3	931
I. T. I. O.	McCulla	1- 7-6	3	694	3	710
I. T. I. O.	Nitey	2- 7-6	6	538	6	463
I. T. I. O.	Phoebe A	36- 8-6	3	425	3	436
I. T. I. O.	Phoebe B	36- 8-6	4	199	4	210
I. T. I. O.	Reed	1- 7-6	1	36	1	41
I. T. I. O.	Soketheche	1- 7-6	3	688	3	673
Total I. T. I. O.			35	7,746		
Magnolia	Cruse	2- 7-6	4	1,216	4	1,304
Magnolia	Denby	11- 7-6	1	44	0	0
Magnolia	Dixon	31- 8-7	1	7	1	9
Magnolia	Harjo A	14- 7-6	1	0	1	0
Magnolia	Harjo B	14- 7-6				
Magnolia	Pottie	35- 8-6	3	600	2	497
Magnolia	Reed	22- 7-6	1	0	1	100
Total Magnolia			11	1,867		
Mid-Continent	Brunner	11- 7-6	1	525	1	100
Mid-Continent	Smith	5- 7-7	1	65	1	70
Mid-Continent	Wadsworth	36- 8-6	7	690	7	670
Total Mid-Continent			9	1,280		
W. B. Pine	Hoyecha	26- 8-6	2	685	2	990
Pine-Phillips	Pottie	35- 8-6	2	495	2	497
Total Pine			4	1,180		
Prairie-Amerada	Sunny	14- 7-6	1	5,690	0	0
Prairie	Chilcoat	25- 8-6	3	1,360	3	1,525
Prairie	Dungan	35- 8-6	1	35	1	35
Prairie	Gibson	14- 7-6	1	5,575	0	0
Prairie	House	2- 7-6	4	860	4	855
Prairie	Talley	14- 7-6	1	2,640	1	0
Total Prairie			11	16,160		
Pure	Cotcha	14- 7-6	2	4,010	0	0
Pure	Harjo	11- 7-6	2	4,130	2	4,881
Total Pure			4	8,140		
Reiter-Foster	Bunyard	14- 7-6	2	3,600	2	100
Roxana	Caesar	11- 7-6	1	178	1	214
Roxana	Hotulke	23- 7-6	1	0	1	101
Roxana	Johnson	13- 7-6	2	6,505	0	0
Total Roxana			4	6,683		
Shaffer	Narcome	36- 8-6	1	50	1	50
Sinclair	Cosar	36- 8-6	3	2,020	3	2,185
Sinclair	Haney	12- 7-6	1	305	0	0
Sinclair	Tewee	14- 7-6	1	230	1	100
Total Sinclair			5	2,555		
Slick	Williams	15- 7-6	1	100	1	100
Snowden-McSweeney	Tiger	13- 7-6	1	577	1	0
Superior	Soketheche	1- 7-6	1	10	1	10
Texas-Indep	Hotulke	23- 7-6	2	700	1	116
Texas	Coker	1- 7-6	3	995	3	1,010
Total Texas			5	1,695		
Tidal	House	1- 7-6	3	545	3	580
Tidal	Johnson	1- 7-6	1	30	1	35
Total Tidal			4	575		
Twin State	Lowe	25- 8-6	1	175	1	180
Total Little River			164	100,910		

SUMMARY

	Aug. 15 Well	Aug. 15 Prod.	Aug. 8 Well	Aug. 8 Prod.
TOTAL BOWLEGS	**328**	**56,349**	**325**	**55,840**
TOTAL EARLSBORO	**279**	**79,023**	**275**	**77,784**
TOTAL SEMINOLE	**294**	**49,633**	**294**	**50,356**
TOTAL SEARIGHT	**69**	**13,175**	**69**	**12,279**
TOTAL LITTLE RIVER	**164**	**100,910**	**144**	**46,923**
GRAND TOTAL SEMINOLE AREA	**1,134**	**299,090**	**1,107**	**242,923**
Average per well		**264**		**219**

Completions in Oklahoma and Kansas, Week Ended August 18, 1928

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Cox-Hamon	4	SE NW 23-1-3 W	2565-2569	870

Creek County

Devonian	1	SE SW NE SW 21-17-8 E	3502-3519	50
Skelly	1		3874-3878	40
Dixie Drlg	2	C SE NW 28-18-11	1510-1521	5M
Standsbury et al	1	NE NW	2632-2654	12
Madden et al	2	NW SE 13-15-9	T.D. 3481	Dry
Nachbell	1	CNL SW NW 9-17-11	T.D 1806	Dry
Kirschner	1	C NE SW 8-17-10	T.D. 2395	Dry
Papoose	1	SW NW 13-18-9	T.D. 3192	Dry

Grant County

Palmer et al	1	SW SE 26-28-3 W	T.D. 4612	Dry

Kay County

Carter et al	7	CNE SW 17-29-1 E	2305-2322	25

Logan County

Ramsey Bros	1	C W E½ SE 32-18-4 W	T.D. 4387	Dry

Marshall County

Smith	3	SE NW 24-5-5 E	595-615	125
Humble	5	NE 25-5-5 E	524-530	8

Muskogee County

Philpin et al	2	NE SE 19-15-19 E	T.D. 1190	Dry
Tautenhann	1	SE NE SE 3-14-18 E	T.D. 1150	Dry

Okfuskee County

Atlantic	1	SE NW 35-11-9	1466-1476	25
Champlin	5	SE NW	2940-2962	4M
Producers et al	2	CSL SW SW 19-11-11	2264-2272	200
Texas	3	SW NE SE 35-11-11	1741-1750	6

Okmulgee County

Misener	2	CEL NE SW 14-14-14 E	1707-1755	5
Henry et al	1	SW NE NE 33-16-12	T.D. 2595	Dry
Kingwood et al	1	SE SW SE 29-15-12	T.D. 2757	Dry

Osage County

Kewanee	10	SE NE SW 21-27-6	2960-2973	45
Link	5	NW NE SE 27-25-9	2155-2191	70
Kewanee	13	SW NW NE 3-26-6	2850-2860	72
Lewis Prod. et al	1	NW 23-26-6	2990-2999	125 (16 Hr.)

Pawnee County

McMann	1	NE SE NE 35-20-8 E	1987-2041	21

Payne County

Garber-Pulse	1	NE SE NW 32-18-3 E	T.D. 1200	Dry

Pottawatomie County

Magnolia	1	NW SE 18-7-5 E	T.D. 4210	Dry
Magnolia	2	SE SW NE 19-7-5 E	4200-4285	43
Magnolia	1	SW NE SW 14-7-4 E	3820-3910	206
Gypsy	6	NE SE NE 19-7-4 E	3782-3880	285
Gypsy	3		4315-4358	385
Sinclair	2	SE SW 24-7-4 E	4125-4275	465
Mid-Kansas	1	SE SW NW 25-7-4 E	4180-4226	2462

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Gypsy	7	SE NE SE 1-9-5 E	4345-4365	1720
Gypsy	1	SE NE 1-8-5 E	4400-4406	960
Slick	1	SW SE SE 3-8-6 E	4390-4400	248
Gypsy	1	SE SW 6-8-6 E	4206-4215	200 (1 Hr.)
Blackwell	3	NE NW SE 11-7-6 E	4534-4537	700
Carter	3	SW NW NE 11-7-6 E	4192-4215	1905
Pure	2	NW SW NE 11-7-6 E	4152-4193	2785
Blackwell	1	NW SW NW 13-5-7 E	2591-2610	18M
Gypsy et al	1	SE NE SE 10-6-6 E	T.D. 4150	Dry

Stephens County

Insligs-Russell	1	NE SW NW 16-1-6 W	T.D. 1905	Dry
Clark et al	1	NE NW SW 13-1-4 W	2992-3002	180
Magnolia	3	NE NW NE 34-1-8 W	1677-1680	18
Magnolia	9	NW SE NW NE 34-1-8 W	1657-1671	27
Carter	2	SW SE 34-1-8 W	1750-1670	20

Tulsa County

Hall et al	1	CEL NE NW 33-19-14	1342-1352	1M
Ellen	7	NW NE NE 25-18-14	1305-1340	20

Wagoner County

McCracken	4	SW NE 21-18-17 E	853-881	24

KANSAS

Barber County

Merriman-Skelly	1	CE¼ 17-31-12 W	T.D. 4530	Dry

Butler County

Blakesley et al	1	NE SW NW 24-27-4 E	T.D. 2743	Dry

Chautauqua County

Elmwood	3	C NW NE 13-32-9 E	1262-1274	1M

Cowley County

Kentucky Nitro. & Oxyg.	4	NWc SW 18-33-7 E	997-999	2M

Greenwood County

Murphy et al	4	NWc SE 6-25-9 E	2151-2174	50
Murphy et al	7	SE NW NW 14-23-9 E	2241-2312	200

Lyon County

Tulsa et al	1	NWc 27-21-12 E	T.D. 2089	Dry

Marion County

Tidal	1	C SW NE 26-20-4 E	T. D. 2801	Dry
Phillips	2	SW NW SW 22-17-4 E	T.D. 3298 OWD	Dry

Mead County

Blackwell	1	C SE 9-33-28 W	T.D. 4650	Dry

Russell County

Keys Pet	8	SE NE SE 32-13-15 W	3313-3316	240

Sumner County

Prairie	1	NW SW NE 3-35-2 E	3440-3459	50
Champlin	4	SWc NW SE NW 9-30-2 W	1900-1929	.33M

Completions in North Louisiana and Arkansas, Week Ended August 16, 1928

Lousiana—Caddo Parish—Pine Island

Company	Well	Location	Depth	Yield
Dixie Oil Co.	Dillon Heirs No. 94	14-21-15	1715	25 bbls.

Webster Parish—Spring Hill

Bethany Oil & Gas Co.	O'Bier No. 1	31-23-9	2650	8M gas
Bruce Richardson	C. O. Bailey No. 1	29-23-9	2754	8M gas

Webster Parish—Cotton Valley

Humble O. & R. Co.	R. R. Cox No. 3	22-21-10	4640	35M gas
Magnolia Pet Co.	Aarnes Cox No. 3	22-21-10	4663	40M gas

East Texas—Panola County

Magnolia Pet. Co.	Ella Baker No. 4	B. C. Jordan HRS	985	2M gas

Shelby County

Chapparrall Oil Co.	Holt No. 1	Matthew Moore HRS	2980	junked, abd.

Arkansas—Smackover

Company	Well	Location	Depth	Yield
Humble O. & R. Co.	Latark Fee No. 1	3-16-15	1965	30 bbls.
W. R. Keever	Ezzell A-6	12-17-15	2137	salt water, abd.

Calhoun

Frank B. Wood, trustee	Spahr No. 3	35-15-16	2418	dry, abd.

Rainbow City—Union County

J. E. Crosbie	H. N. Brown No. 1	8-17-14	3354	dry, abd.
O. W. Estes	Rowland No. 2	14-17-14	3368	salt water abd.
Garrett-Modisette Drl. Co.	Pyron No. 1	21-17-14	3060	dry, abd.
Hollyfield & McFarlane	Kelly No. 1	9-17-14	3223	200 bbls.
Lion O. & R. Co.	Rowland No. 4	15-17-14	2730	junked, abd.
Lion O. & R. Co.	Sinclair No. 4	16-17-14	2768	20M gas
Magnolia Pet. Co.	Gregory No. 1	15-17-14	2852	48M gas
Oilwell Corp.	Ezzell No. 2	3-17-14	3283	salt water, abd.
Oilwell Corp.	W. H. Perdue B-2	10-17-14	3300	salt water, abd.
Skelly Oil Co.	W. H. Perdue No. 4	10-17-14	3267	100 bbls.
Skelly Oil Co.	W. H. Perdue No. 5	10-17-14	3363	salt water, abd.

Drilling Operations in Oklahoma and Kansas, Week Ended August 18, 1928

	Aug. 18 Loc.	Rigs	Drg.	S.D.	Week Ended Total	Aug. 11 Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Osage	8	6	23	4	41	5	5	24	3	37
Bristow-Cushing	4	2	40	4	50	4	7	34	8	53
North Oklahoma	11	3	52	29	95	6	3	50	31	90
South Oklahoma	10	16	84	31	141	9	14	79	27	129
Muskogee	..	8	38	28	74	..	9	43	23	75
Okmulgee-Bristow	15	42	55	21	133	15	30	63	22	130
Seminole Dist.	25	63	350	27	465	24	64	328	12	444
Total Oklahoma	73	140	642	144	999	63	132	621	142	958
KANSAS	*82	...	160	72	314	*87	...	158	74	319
GRAND TOTAL	155	140	802	216	1,313	150	132	779	216	1,277

*Location and rigs combined.

Completions in N. E. Central, West, Panhandle and North Texas, Week Ended August 11, 1928

NORTH AND EAST CENTRAL

Brown County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Gracey-Summar...	1-Baker	Honeycutt	T.D. 1175	Dry
Richardson.....	1-Mears	Mears	T.D. 1487	Dry
Owens et al.....	1-Sewalt	Steiner	T.D. 1002	Dry
Midland.....	2-Hickman	McGloin	1256-1271	90
Kone Prod.....	5-Hickman	Benson	1262-1290	40
Anna Belle.....	7-Hickman	Benson	1275-1285	65
Anna Belle.....	5-Hickman	Benson	1230-1252	150
Valley.....	8-Teston	Curlong	1182-1206	75
Burris et al.....	6-Newton	Curlong	1184-1206	190
Sinclair.....	4-Eubanks	Mitchell	1204-1218	40
Mid-West Expl.....	1-George	Cross	1300-1322	300
Charter.....	8-Byler	T&NO	1312-1327	350

Callahan County

Shaffner.....	1-Long	Anderson	277-291	1½
Shaffner.....	2-Long	Anderson	270-291	1
Galloway et al.....	2-Connolly	Comal Co. Sch. Ld.	465-466	5
McLendon et al....	1-Ramsey	D&DA	T.D. 524	Dry
Westheimer.....	1-Snider	BBB&C	T.D. 1205	Dry
Peer.....	1-Gibson	BBB&C	T.D. 1441	Dry
Dickey Bros.....	2-Williams	D&DA	T.D. 711	Dry
McCamey.....	1-Biggerstaff	SP	T.D. 757	Dry

Coleman County

Dunningan et al...	1-Newman	Bends et al.	T.D. 1204	Dry
Red Bank.....	1-May	Sec-27, Blk-1	T.D. 3410	Dry

Eastland County

Fisher.....	1-Stubblefield	ET	1369-1370	3M

Jack County

Bland et al.....	1-Keith	Keith	T.D. 1620	Dry
Christie Bros.....	4-Jones	SP	T.D. 2350	Dry
Liedecker et al....	4-Hollman	Rier	T.D. 2040	Dry
Liedecker et al....	1-Moore	Williams	T.D. 2085	Dry

Runnels County

Vacuum.....	1-Flanagan	Diaz	T.D. 2700	Dry
Vacuum.....	1-Fowler	Diaz	T.D. 2583	Dry

Throckmorton County

Reiter-Foster.....	3-Graham	TE&L	T.D. 3946	Dry
Christie Bros.....	1-Dickey	TE&L	T.D. 618	Dry

NORTH TEXAS

Archer County

Stumpf-Hines.....	6-Perkins et al.	DCSL	999-1027	30
Barnsdall.....	6-Wilson	Howard	1706-1707	110
Gifford.....	1-Prideaux	Rohus	689-695	5
Long et al.....	1-Krupka et al.	Scott	1261-1263	28
Sun.....	3-Ford	Fitzgerald	T.D. 1019	Dry
Brown et al.....	1-Dempsey	Denton Co. Sch. Ld.	T.D. 1552	Dry
Petroleum Prod....	1-Wilson	Geraldine	T.D. 1609	Dry
Marland et al.....	1-Turbeville	.....	T.D. 1553	Dry

Denton County

Gray-Anderson.....	1-Ruckers	Harmin	T.D. 2508	Dry

Wichita County

Cable et al.....	1-Williams et al.	McCoal	T.D. 1321	Dry
Clark.....	1-Blair et al.	KWVFL	T.D. 1782	Dry
Hammon.....	2-Munger	KWVFL	T.D. 1784	Dry
Hammon et al.....	2-McCarty	Eaves	1331-1368	40

Wilbarger County

Phillips.....	5-Waggoner	H&TC	1850-1876	20
Phillips.....	1-Waggoner	H&TC	2365-2380	300
Fain-McGaha.....	10-Waggoner	H&TC	2253-2357	1175
Barkley-Meadows..	3-Waggoner	H&TC	1842-1852	40
Barkley-Meadows..	4-Waggoner	H&TC	1864-1896	200
Howell.....	2-Waggoner	Butler	T.D. 1920	Dry
Consolidated	1-Waggoner	Calhoun	T.D. 1950	Dry
Manhattan.....	1-Waggoner	H&TC	T.D. 2460	Dry

Young County

Kleiner-West et al..	16-Langston	TE&L	551-569	100
Hall et al.....	2-Davis	TE&L	545-560	75
Gwynn.....	2-Kunkel	BB&C	1142-1152	105
York State.....	1-Hermanson	GB&N	T.D. 565	Dry
Wise-Jackson.....	1-Hamm	TE&L	T.D. 601	Dry
Franklin et al.....	1-Carpenter	Sergant	T.D. 602	Dry
Petroleum Prod....	4-Henning	TE&L	T.D. 1201	Dry

PANHANDLE

Gray County

Travis et al.....	1-Webb	H&GN	2855-2943	30
Mystic.....	6-Bowers	H&GN	3015-4603	85
Gibson.....	9-Bowers	H&GN	3080-3105	250
Travis.....	1-Morse	H&GN	2410-2630	5M
Osborne et al.....	1-Morse	H&GN	2630-2802	5M
Lefors.....	2-Shaw	.....	2675-2710	1675

WEST TEXAS

Crane County

Gulf Prod.....	4-Waddell	PSL	T.D. 3528	Dry
Duffey et al.....	1-Cowden	CCSD	2358-2391	214 (14 Hrs.
Gulf Prod.....	5-McElroy	CCSD	2760-2900	160

Crockett County

Republic Prod.....	1-Powell	EL	2601-2608	350
Gulf Prod.....	3-Powell	EL	2608-2625	150
McMann et al.....	1-Powell	EL	2633-2650	3
California.....	2-Powell	EL	2592-2613	100
California.....	1-Powell	EL	2552-2570	490
Anderson et al.....	1-Univ.	Univ.	T.D. 2510	Dry
Transcontinental...	1-Atwood	TC	T.D. 3048	Dry

Glasscock County

Landreth Prod.....	2-Houston	Sec-18, Blk-35	T.D. 2770	Dry

Howard County

F.H.E.....	6-Roberts	W&NW	2946-3000	100 (1 Hr.)
Magnolia.....	7-Roberts	W&NW	2513-2710	397 (14 Hrs.)
Merrick et al.....	6-Hooks	Sec-140, Blk-29	1864-1878	125
F.H.E.....	2-Roberts	W&NW	2500-2726	500

Pecos County

Mid-Kans et al....	1-Yates	Sec-32, Blk-194	1617-1706	620
Mid-Kans et al....	23-Yates	Yates	1201-1342	350 (1 Hr.)
Gulf Prod.....	14-Yates	Runnels Co. Sch. Ld.	1165-1265	345
Gulf Prod.....	11-Yates	Runnels Co. Sch. Ld.	1135-1328	200 (1 Hr.)
California.....	4-Smith	TC	1585-1752	175 (8 Hrs.)
Roxana.....	8-Smith	TC	1555-1724	88 (1 Hr.)
Mid-Kans & Transc.	4-Yates	I&GN	1085-1174	1080 (9 Hrs.)
Humble.....	5-Smith	TC	1348-1458	21 (4 Hrs.)
McMann.....	2-Smith	Sec-140	1130-1228	120 (1 Hr.)
Mid-Kansas.....	1-Yates	Runnels Co. Sch. Ld.	T.D. 1325	Dry
Sun.....	1-Univ.	Sec-8, Blk-17	T.D. 2100	Dry
Diamond.....	1-Blackstone	TC	T.D. 2464	Dry
Farrell et al.....	1-Univ.	Univ.	T.D. 2247	Dry
Amerada.....	1-State	T&STL	T.D. 1460	Dry

Reagan County

Marland.....	1-Univ.	Univ.	T.D. 3205	Dry
Moody.....	1-Walter	Henderson	T.D. 3005	Dry
Texon et al.....	1-Univ.	Univ.	T.D. 3103	Dry

Winkler County

Pure.....	5-Hendricks	PSL	2761-2996	150
Pure.....	7-Hendricks	PSL	2805-2808	2544
Roxana-Texas.....	4-Hendricks	PSL	2762-2834	8000
Humble.....	2-Hendricks	PSL	T.D. 3222	2M
Gulf Prod.....	21-Hendricks	PSL	2720-2795	25000
Atlantic.....	10-Hendricks	PSL	2714-2716	20000
Atlantic.....	9-Hendricks	PSL	2722-2730	30000
Atlantic.....	2-Hendricks	PSL	2845-3058	500
Winkler.....	1-Hendricks	PSL	3110-3125	450
Southern Crude....	T88U3-Hendricks	PSL	2860-2945	2160
Southern Crude....	T88U2-Hendricks	PSL	2803-2830	300
Southern Crude....	T88M14-Hendricks	PSL	2854-2865	738
Southern Crude....	T88J1-Hendricks	PSL	2932-2940	6000
Skelly.....	8-Hendricks	PSL	2705-2707	28704
Skelly.....	7-Hendricks	PSL	2535-2759	28000
Skelly.....	6-Hendricks	PSL	2602-2742	9500
Skelly.....	4-Hendricks	PSL	2647-2788	6600
Roxana.....	3-Hendricks	PSL	2753-2813	3600
Roxana.....	4-Hendricks	PSL	2778-2791	57,000 & 27M

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended August 18, 1928

OKLAHOMA

Beckham County

Company	Well No. Farm	Location
Producers Explo...	2-Pederson	NW NE NW 23-9-23 W
Magnolia.....	1-Ensley	C SW SW 21-9-23 W

Carter County

Magnolia.....	3-Winters	NWc SW SE 19-1-3 W
Hall-Briscoe.....	3-Miller	NEc SW 29-1-3 W

Cotton County

Cullum-Perkins....	3-Priddy	SW NW NE NE 3-2-10 W

Creek County

Gled.....	1-Murrell	NW 17-19-9
Collins et al.....	1-Littlehead	CWL SE NE 26-18-11
Irelan et al.....	1-Weaver	NW SE 16-17-11 OWD
Billingslea et al....	1-Garrett	NE SE 17-16-10
Gypsy.....	12-Luckey	SE SW NW NW 28-16-9 OWD
Billingslea et al....	1-Holder	SE NE 17-16-10
Madden et al.....	2-Wright	NE SW SE 13-15-9

Grady County

Carter.....	3-Horton	SE 8-3-5 W
Beck et al.....	1-Mileur	NW 2-4-8 W

Hughes County

Pure.....	1.....	NE SW 18-8-9 E
Jarvis-Holmes.....	1-Street	NW SE NW 21-7-8 E
Jarvis-Holmes.....	2-Street	SW SE NW 21-7-8 E

Jefferson County

Company	Well No. Farm	Location
Gypsy.....	4-Busby	SW SE SW 17-7-5 W
Bridewell et al.....	1-Jennings	SW 20-6-5 W

Kay County

Nehr.....	1-Myer	C SW SW 3-27-1 E
Texas.....	1-Cassity	NW NE SW 29-25-1 W

Logan County

Roxana.....	2-Freelove	NW SW SW 17-19-4 W
Sinclair.....	2-Webber	NE SE SE 18-19-4 W
Sinclair.....	3-Webber	SW SE SE 18-19-4 W
Roxana.....	2-Rouse	NW NE NE 19-19-4 W
Roxana.....	3-Ross	NE SW 19-19-4 W
Crosbie et al.....	3-Shaffer	SW NW 20-19-4 W

Marshall County

Smith.....	4-Null	SW SE SE NW 24-5-5 E

Murray County

Gilcrease.....	1-Wolfe	SW NW 21-1-2 E

Muskogee County

Paul et al.....	4-James	SW SW 17-14-17 E

Okmulgee County

Texas.....	2-Asbury	SE SE 8-15-14 E
Tiger Mountain....	3-Tucker	SW NE SE 2-13-14 E
McInturff et al....	1-Porter	SE NE SE 4-12-14 E
Winemiller.....	1-Escoe	NE SW SW 22-16-11
Shaffer.....	1-Roberts	SE SW 1-15-12
Sheldon et al.....	1-Dixon	NW SW SE 14-14-11

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended August 18, 1928 (*Continued*)

Okfuskee County

Company	Well No. Farm	Location
Dixie	1-Drew	NE SW 8-13-10
Producers et al	3-Barnett	CEL SW SW 19-11-11
Humphrys et al	2-Adams	CWL SW NE 23-11-11
Umburn	6-Tiger	CSL NE NW 2-10-11
Johnson et al	1-Robinson	SW NW NW 12-10-11

Osage County

Ross	9	SW NE NW 14-29-11
Phillips	10	NW SW SE 17-27-6
Phillips	11	NE SW SW 17-27-6
Marland et al	9	NW NE SE NW 15-24-8
Gray	2	CNL N½ S½ SE 34-24-8
Moore-Ohio Osage	9	CNL S½ Sp SW 9-21-9
Moore	2	NE NW 16-21-9
Mundy	1	NW SE 4-20-9

Pawnee County

Magnolia	3-Vickers	SW NW NE 15-20-6 E
Commercial Drlg	1-Caples	NE SW NE 31-20-9

Pottawatomie County

Atlantic-Gypsy	1-Delaware	SE NE NE 13-9-4 E
Texas	6-Rogers	SE NW SE 5-9-5 E
Magnolia	2-Clour	NE SE 11-7-4 E
Darby	2-Harber	NE SW 23-7-4 E
Sinclair	7-Blandin	NE NW SW 24-7-4 E
Gypsy	3-Bruno	SW NE NW 25-7-4 E
Gypsy	2-Collins	NE SE 25-7-4 E
Mid-Kansas	3-Gesselman	SW NW 25-7-4 E
Mid-Kansas	4-Gesselman	NE SW NW 25-7-4 E
Gypsy	1-Dodson	NE SE 26-7-4 E
Magnolia	1-Cherry	SE NE 26-7-4 E
Magnolia	4-Yants	NW NE SW 19-7-5 E
Roxana	1-Yants	NW SW 28-7-5 E
Gypsy	1-Johnson	NW SE NW 29-7-5 E
Independent	1-Lowe	NW SE SW 29-7-5 E
Sinclair	2-Nadash	SE NW SW 29-7-5 E
Barnsdall	2-Stahl	SE SW NE 30-7-5 E

Seminole County

Slick	1-Campbell	SE NW 6-9-6 E
Slick	1-Tiger	NW SW SE 13-8-5 E
Gypsy	4-Denmark	SW SE 11-7-6 E
Pure	4-Harjo	SE SW NE 11-7-6 E
Gypsy	10-Hulhoke	NE SW SE 14-7-6 E
Independent	6-Tewee	SE NW SE 14-7-6 E
Reiter-Foster	4-Bunyard	NE NW SW 14-7-6 E
Carter	4-Cotche	SE SW NE 23-7-6 E
Independent	7-Harris	NE SE NW 23-7-6 E
Independent	8-Harris	NE NW NW 23-7-6 E
Pure	9-Cotche	SW SE NE 23-7-6 E
Roxana	4-Hotulke	NW NE NW 23-7-6 E

Stephens County

Magnolia	4-Bell	SW SE SW 13-1-4 W
Fossett et al	1-Adams	NW SW 19-1-8 W
Carter	3-Burke	NE SW SW SE 34-1-8
Medlin et al	4-Burke	SE NW NW NE 34-1-8 W
Medlin et al	1-Simpson	NE SW SE 34-1-8 W
Pace et al	7-Bristowe	NE NW NW 18-2-7 W
Pace et al	2-Peniston	SW NW SW NE 18-2-7 W

Tulsa County

McMahon et al	1-Meyer	NW NE 14-19-10
Glidden	4-Wray	SE SW SW 35-19-13

KANSAS

Butler County

Rosenthall et al	11-Shaffer	NW SE SE 4-27-6 E
Blue Stem	3-Doughty	CWL NW SW 5-27-6 E
Brosi et al	1-Glaze	SE NE SW 5-27-5 E
Empire	5-Cranston	NE NW SE 22-27-5 E

Elk County

Silurian	1-Chaney	SE 8-29-11 E

Greenwood County

Kansas	1-Hendrickson	SEc 7-25-9 E

Marion County

Youker et al	1-Walker	SE SW SW 11-17-4 E

Sumner County

Boyer et al	1-Griffith	NEc SW SW NE 15-35-2 E OWD

TEXAS

NORTH AND NORTH CENTRAL

Archer County

Magnolia	15-Richardson	Blk-5	Anderson
Christie et al	7-Richardson	Blk-5	Anderson
Texas	11-Rogers	Sec-1600	TE&L
Grebin et al	2-Alexander	Blk-22	Meade
Gifford	1-Prideaux	Abst-1126	Rohus
Jones et al	1-Andrews	Sec-1803	TE&L
Brashear et al	1-Harwell	Abst-691	.....
Beavers	1-Andrews	Abst-68	Collinsworth
Long et al	1-Feldhouser	Abst-125	Edwards
Pandem	11-Hudson	Blk-80	Harris
American	14-Turbeville	Blk-146	Carson
Kruger	1-Turbeville	Blk-176	McKinney
Bridwell-Heydrick	1	Sec-23, Blk-11	ATNCL
Mount-Long et al	5-Perkins	League-3, Blk-27	Denton Co. Sch. Ld.
Texas	4-Griffith	League-3, Blk-12	Denton Co. Sch. Ld.
Stampf-Hines	7-Perkins	League-3, Blk-13	Denton Co. Sch. Ld.
Kemrow	1-Campbell	League-3, Blk-1	Denton Co. Sch. Ld.
Wright et al	1-Newell	Sec-1, Abst-422	SP

Brown County

Milham	4-Rosser	.....	Cross
Hart	1-Carey	Blk-35	H&TC
Midwest Explo	2-George	.....	Cross
Charter	9-Byler	Blk-43	T&NO
Charter	3-Byler	Blk-43	T&NO
Daniels et al	1-Leslie	Sec-36	Prentice
Cranfill-Reynolds	11-Eubanks	Blk-141	Mitchell
Bearman et al	1-Miller	.....	Swindell
McLester et al	14-Wooldridges	.....	Gaines
Valley	9-Teston	Blk-151	Curlong
Kone Prod	13-Hickman	Blk-783	Benson
Midland	4-Hickman	Blk-801	McGloin
Anna Belle	9-Hickman	Blk-783	Benson

Callahan County

Company	Well No. Farm	Location	Survey
Calloway et al	3-Connolly	Sec-44	Comal Co. Sch. Ld.
Jackson	1-Long	Sec-86	Comal Co. Sch. Ld.
Swoveland et al	1-Gilliland	Sec-237	Smith

Clay County

Jeffers et al	1-Washam	Blk-103	Byers Bros.

Comanche County

Texas Fidelity	1-Anglin	.....	Keebler
Sawyer	1-Cogle	.....	Lampas Co. Sch. Ld.

Coleman County

Jamison-Polland	1-Hinds	Sec-75	GH&H
Dunigan et al	1-Rice	Blk-91	Bard et al.
Wilson et al	1-Polk Bros.	Sec-8, Blk-151	Martinez
Flandell	1-Kingsberry	Blk-496	Wharton Co. Sch. Ld.
Newsame et al	1-Fletcher	Sec-5, Blk-151	Martinez
Whiteside	2-Stafford	Blk-275	Aldesota
Eastland et al	5-Morris	Sec-15, Blk-722	Webber
Ilsing Prod	1-Eddington	Sec-28, Blk-187	Victoria Co. Sch. Ld.
Henshaw	2-Harris	Sec-16	GH&H

Eastland County

Panhandle	27-Hightower	Blk-2	McLennon Co. Sch. Ld.
Price et al	1-Schnick	Sec-1, Blk-4	H&TC
Porter Dev	1-Earp	.....	Head
Chestnut-Smith	1-Hamell	.....	Conway
Chestnut-Smith	2-Brashears	.....	Van Norman
Arkansas	11-Connellee	.....	Assurey

Jack County

Walton	1-Maxey	Abst-568	SP
Shaw	9-Cullers	Sec-4	Cullers
Panhandle Prod	1-Keith	Abst-1418	Riley
Panhandle Prod	1-McKelvey	Abst-256	Hughson

Palo Pinto County

Conway Bros. et al.	1-Brothers	Sec-62, Blk-3	T&P
Gordon et al	1-Watson	Sec-39, Blk-1	T&P
Richardson et al	1-Hart	Sec-5	Thompson

Wichita County

Clark	2-Kemp et al	Sec-26, Blk-20	KWVFL
Omohumdro	15-Pace	Abst-255	Scott
Texas	5-Waggoner	Abst-454	George
Comac Drlg. et al	1-Putman	Abst-240	Weatherly
Douglas Prod	9-Fee	Abst-726	DL&C

Wilbarger County

Waggoner Fain	4-Waggoner	Sec-5, Blk-5	H&TC
Dixie	1-Webb	.....	Hayman
Beasley	1-Waggoner	Sec-18, Blk-4	H&TC

Young County

Ginsbers	1-Bratcher	Sec-1991	TE&L
Atlantic et al	1-Boone	Abst-34	BBB&C
Beavers	1-Stewart	Abst-76	Dawson
Pennell et al	2-Johnson	.....	Sergeant
Shappell	2-Garrett	Sec-1487	TE&L
Kleiner-West et al	17-Langston	Sec-1490	TE&L
Kleiner-West et al	18-Langston	Sec-1490	TE&L
Nix et al	1-Davis	Sec-1487	TE&L
Creath-Kell	1-Bryan	Sec-1902	TE&L
Pana	2-Allen	Abst-171	Lynch
Schermerhorn et al	2-Thompson	Sec-2692	TE&L

WEST TEXAS AND PANHANDLE

Carson County

Travis	1-Harrell	NEc Sec-162, Blk-7	I&GN

Crane County

Gulf Prod	54-McElroy	Sec-201, Blk-F	CCSD
Church-Weekly et al.	2-Lassater	NW SE SW Sec-34, Blk-30	Univ. Lds.
Gulf Prod	5-Wadell	SWc NE Sec-11, Blk-B-25	PSL

Crockett County

Callahan et al	1-Todd	C SW Sec-13, Blk-YZ	EL

Gray County

Shamrock	1-Dial	NWc Sec-49, Blk-25	H&GN
Texas	2-Langham	SE NE SE Sec-1, Blk-B-2	H&GN
Texas	1-Key	NWc Sec-1	B&B
Texas	2-Davis	SWc NE Sec-8, Blk-1	ACH&B

Howard County

Marland-Texon	2-Roberts	NEc Sec-158, Blk-29 OWD	W&NW
Magnolia	12-Roberts	SW NW SW Sec-136, Blk-29	W&NW
Magnolia	11-Roberts	NW SW SW Sec-136, Blk-29	W&NW
Magnolia	10-Roberts	NWc SW Sec-136, Blk-29	W&NW
Hyer-Duningan	1-Clay	SWc Sec-126, Blk-29	W&NW
Evans	2-Roberts	NWc NE SE Sec-157, Blk-29	W&NW
Harrison et al	1-Dodge	SEc Sec-9, Blk-30	T&P

Midland County

Sheldon et al	1-Francis	Sec-13, Blk-40	T&P

Pecos County

Amerada	2-State	NEc Sec-28, Blk-1401	T&STL
Mid-Kansas-Transc.	5-Yates	Sec-62, Blk-1	I&GN
Gulf Prod	17-Yates	..... Runnels Co. Sch. Ld.	
Gulf Prod	18-Yates	..... Runnels Co. Sch. Ld.	
Gulf Prod	19-Yates	..... Runnels Co. Sch. Ld.	
Humble	9-Smith	Sec-36, Blk-194	GC&SF

Upton County

Cordova Union	1-Fee	SWc Sec-4, Abst-796	GC&SF

Ward County

Rector	1-Johnson	Nc Sec-10, Blk-32	H&TC
Shipley et al	1-Hazlett	Sec-17 Blk-B-5	H&TC
Lovelace et al	1-Rodmond	Sec-162, Blk-34	H&TC

Winkler County

Southern Crude	T-67-1A3-Hendricks	CEL SE Sec-42, Blk-B-5	PSL
Humble	5-Hendricks	CWL SW Sec-39, Blk-26	PSL
Gulf Prod	30-Hendricks	CEL NE Sec-45, Blk-26	PSL
Southern Crude	T-88-M24-Hendricks	NEc SE Sec-33, Blk-26	PSL
Atlantic et al	12-Hendricks	CWL E½ Sec-40, Blk-26	PSL
Atlantic	3-Hendricks	CEL W½ NE Sec-44, Blk-26	PSL
Eastland	2-Hendricks	CWL SE NW Sec-35, Blk-B-5	PSL
Roxana-Texas	3-Hendricks	SWc NW Sec-39, Blk-26	PSL
Southern Crude	T-88-U5-Hendricks	SW SE SE Sec-41, Blk-26	PSL
Gulf Prod	29-Hendricks	CWL E½ NE Sec-45, Blk-26	PSL
Gulf Prod	28-Hendricks	CEL W½ NE Sec-45, Blk-26	PSL
Atlantic	5-Hendricks	CWL NW Sec-46, Blk-26	PSL
Southern Crude	T-88-P1-Hendricks	C NW Sec-28, Blk-26	PSL
Southern Crude	T-88-K4-Hendricks	SW SE NE Sec-41, Blk-26	PSL
Southern Crude	T-88-A6-Hendricks	CWL E½ NE Sec-44, Blk-26	PSL
Southern Crude	T-671-E3-Hendricks	SE NE NE Sec-42, Blk-B-5	PSL

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Start Deeper Tests In Rainbow Pool

TULSA, Aug. 16.—Deep tests, one "inside" and the other some distance out from the limits of production in the Rainbow pool of Union county, Ark., supply chief interest in that waning area. The test which is to test formations lower than the Gregory sand, productive at depths ranging from 3100 to 3250 feet, is the Pure Oil Co.'s No. 1 E. F. Gregory in the SE NE of 10-17S-14W. It was a failure in the Gregory horizon as were its offsets.

Three other deep tests are under way. Pure Oil Co. has started its

F. C. Henderson, left, president of The Henderson Co., and J. O. Huffman, general superintendent, at the new gasoline plant of the company in the Rainbow field, Union county, Ark.

No. 1 R. W. Gaddy, SW SE NW of 13-17S-14W, more than a mile and a quarter east and south of deep sand production. It is inside a large block of acreage held by the Pure, no offsets being held by other companies. This test is started with the intention of drilling 5000 feet or more, unless paying production is found at shallower levels. Formation levels of wells to the north and the west of the test indicate the existence of a "high" somewhere in the vicinity.

The Ohio Oil Co. has rigged up for a deep test in the NW NE of 12-17S-14W. This location is a half mile south of production from the Crain sand, in the original Champagnolle pool, found at levels shallower by 200 feet than the Gregory sand to the southwest. The Ohio's test is inside a large block of acreage.

Walver and others have started a test in the NE NW NE of 25-17S-14W. This is a mile and a half south and a little east of the deep test the Pure Oil Co. is drilling.

Output in the Rainbow field continues to decline despite a half dozen or more completions each week. Except for wells now drilling the campaign may be said to be near its close. Of the 38 deep sand wells producing on a recent date, only 13

Syphon in Oil Field Boilers Improves Circulation

TULSA, Aug. 18

IN COMMON with many types of machinery and equipment, oil field boilers are being improved by the application of principles in use in industries other than oil.

Speedier water circulation has the effect of keeping the temperatures more nearly the same throughout the boilers. This has been accomplished in Scotch marine boilers by equipping them with hydro-kineters, or by connecting them so that, while warming up, the cold water can be pumped from the bottom and discharged through the feed connections.

Water tube boilers owe much of their success to the fact that serious consideration has been given to the water circulation, which has helped to make them quick steamers, and capable of meeting sudden demands for more steam without loss of pressure.

The Nicholson Thermic Syphon has been incorporated in the design of their boilers by the Oil Well Supply Co., of Pittsburgh. According to L. R. Brown, of the Oil Well Supply Co., syphon-equipped boilers are meeting with success in the oil fields, as has been the case in railroad experience for several years past.

The lower, or throat end of the syphon is circular in cross sections and electrically welded to the front tube sheet, just below the tubes and opening into the bottom of the shell. At a distance of about twice the diameter of the throat, the cross section becomes rectangular, and slants upward, the width remaining the same, but the length increasing until, at the crown sheet, the length is nearly that of the firebox. A section of the crown sheet is cut out, and the syphon is electrically welded into the opening. To prevent sagging the flat sides of the syphon are stayed with hollow stay-bolts.

Brick arches extending from the bottom of the syphon to the sides of the firebox may or may not be used. Their use serves to baffle the gases, thereby giving more complete heat transfer, and also protecting the welded tubes from possible burning from the fire.

Being located in the hottest part of the firebox, the water in the syphon is always exposed to the highest temperatures. This causes the water to rise in the syphon, it being replaced by the cooler water drawn in from the bottom of the shell, the Venturi effect in the throat bringing the water in at a high velocity. This augmented circulation tends to keep an uneven temperature of water throughout the boiler, allowing the boiler to be brought up to pressure without undue strain on the tubes and joints.

The purpose of the syphon is four fold: to increase the steaming capacity of a boiler of given h.p. rating; to save fuel; to reduce the deposit of sediment in locations of poor circulation; to protect the crown sheet from sagging due to accidental low water in the boiler. At a sudden demand for more steam, a slight drop in pressure makes all the water available as steam. With a slight increase in firing the temperature of all the water is quickly raised to that of steam at the desired operating pressure.

Due to the increased circulation most of the mud and sludge in the water is kept in suspension and carried back to the water legs, so that it may not settle and adhere at the points of poor circulation. This tends toward better heat transfer in the boiler, because of less scale, and makes proper washing of a boiler easier for the operator.

The rapid circulation through the syphon produces a fountain-like effect, raising water up from the bottom of the shell and discharging it over the whole crown sheet. This protects the crown sheet with water to a large extent in the event the general water level in the boiler is allowed to fall below the uppermost part of the crown sheet. There have been several cases in railroad locomotives where boiler explosions due to low water have been prevented by syphons.

Field tests have shown the steaming capacity of a syphon equipped boiler to be about 9 per cent greater than the ordinary type, with a general efficiency increase of about 15 per cent, and with no loss in the quality of the steam. Firing up was accomplished in a shorter time with a syphon equipped boiler, and with about 15 per cent smaller fuel consumption than required for a similar boiler without the syphon.

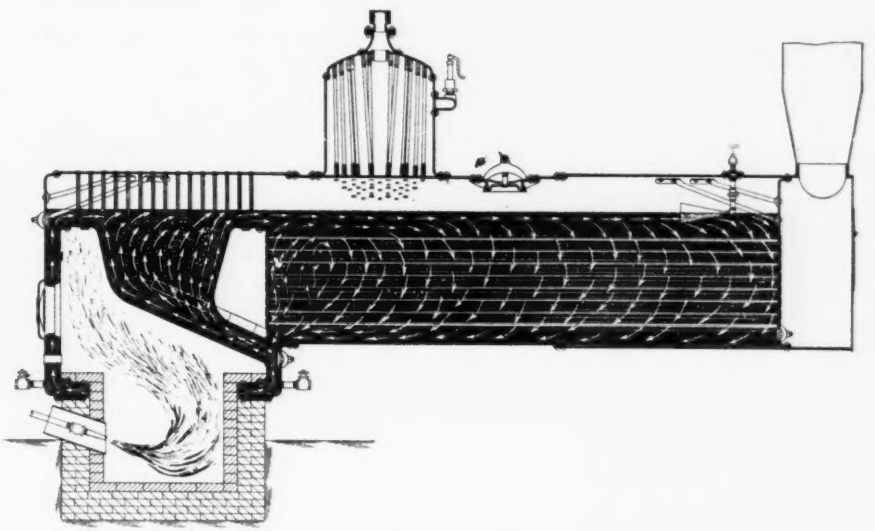

Diagram of the Nicholson Thermic Syphon in action. The syphon is being adapted to oil field boilers by the Oilwell Supply Co., of Pittsburgh

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were flowing their production and nearly every well in the field was making water and B. S., some of them cutting as high as 40 per cent.

While several gasoline plants originally were planned for this field, only one has been built. The Henderson Co., which operates a gasoline plant at Delaware, Okla., and in the original El Dorado field of Arkansas, recently put into operation a four-unit compression plant of rated capacity of 35,000 gallons daily. The plant consists of two 80 horsepower engine-compressor units and two of 175 horsepower. A fifth was to be added of the 175 horsepower size. The outlook at present is for an adequate supply of gas for the plant, of yield stated to be about two gallons per thousand feet.

Celebrate Pipeline Opening

CASPER, Aug. 18.—Lions club at Kemmerer, Wyo., celebrated beginning of operations of the Midwest Refining Co.'s pipe line from the LaBarge oil field to railhead at Opal, with a banquet Saturday night, Aug. 18. Midwest Refining Co. was represented by H. C. Bretschneider of Denver and R. S. Ellison of Casper, vice presidents of the company. Utah Oil Refining Co. was represented by its president John Howard of Salt Lake City, Utah. Almost the entire production of the field is being purchased by the Utah Oil Refining Co.

Not "Ethics", But What Is Good Business

By Warren C. Platt, Editor

DISCUSSION in the oil business is daily increasing on the subject of codes of ethics, until now even the dignified and thoughtful American Petroleum Institute has appointed a sizable committee of distinguished executives to work out, if they can, a code of ethics for the entire business.

There should be no cold water poured on this movement, but may it not be desirable to suggest that the discussion veer away from the somewhat ethereal and "highfalutin" phrase of a "code of ethics" to some terminology which will be a little nearer the ground and which may appeal more to the everyday business minds of the industry.

We want ideals in business. In fact we have them. Even in the oil business. But so much has been said about "codes of ethics" and so many people and companies have been praised as "ethical"—whatever that means—or have been damned as "unethical"—and you can figure out the amount of hell fire and brimstone that implies too—that one wonders if a more practical title to the work may not cause everyone to get down out of the clouds a bit and deal with everyday affairs in language all men will clearly understand, even the tool dresser and tank truck driver.

Stripped of the high-sounding name, what the industry seeks is knowledge as to what is good business; as to what will afford the best product and service to the public at as low a cost to the companies as possible and which will still bring in a reasonable profit to the stockholders. The nearer the discussion sticks to plain business fundamentals the more good will be accomplished.

Codes of ethics up to the present have generally consisted of a lot of "Thou shalt nots;" such as not to cut the price of the established leading companies; not to use more than soft language to take each other's customers away; don't paint a garage man's chicken coop when you want his business; don't give away soda pop on a hot summer's day for gasoline customers, and so on, for as long a list as you want to write.

In making these somewhat facetious comments on the lauded ethics of a business we do not want to be taken as disparaging the work which has been done to date on codes for the oil business. That work represents the struggle of men to get together and talk intelligently about their business. Like all new things it was not perfect but much good came of it.

However, isn't now the time to strike more sanely and directly at fundamentals? The American Petroleum Institute's committee can hardly talk in terms of the garage man's back fence, or the number of pumps per block, or whether you should get a dollar paid down on them or two dollars. At least the institute's committee can hardly do that and expect to be taken seriously.

But two important things have been done, or have happened to date, whichever way you will have them, that directly bear on this subject of sound business in the oil industry:

First and perhaps foremost is the uniform cost accounting work that the Institute has been working up for all branches of the industry for many years and which now is nearing completion.

If every oil company, big and little, will adopt this then each will know, in identical terms, down to the smallest operation, whether it makes money on that operation or not. The accounting can be so worked out that each oil man can easily tell as to every gasoline pump he has out, as to whether each salesman or truck produces a profit or a loss. To know where you stand financially and as to detailed costs is the first need of any business today.

The second big thing is that the thinking of the whole industry has come to the point of men realizing that, regardless of what their costs may be, their prices are fixed by the amount of material and service on the market. If there is too much material or too much service, more than the market needs, their prices will be low. Whether their costs are twice the price or ten times the price makes no difference. If there is not enough material or service, their prices will be high and such high prices will invite in more material and service until a reasonable price level is reached. Generally prices drop from an excessively high level to an excessively low level and stay there until enough people drop out to bring the balance back again.

Isn't the big opportunity of the Institute to put these two points together with such additional data as will make it easily understood by every man in the oil business and which will be put to him in such plain, intelligent fashion that he will apply it in his own business at once?

As an amplification of these two major points there should be data on the rate of increase of petroleum markets by small territorial units, the point being put over that, while a state may show a big increase in gasoline gallonage, what the marketer must consider is the increase in each county, each township, town and even each block. The material must be put in such shape that the big companies will realize that they not only can but that they do upset the balance between supply and demand by not getting down to economic fundamentals and by not thinking in terms of even the city block.

While they are at it, the Institute's committee might also discuss the question of whether it is better for a big integrated company to look upon itself solely as an outlet for its crude oil producing department, or should it make every department stand on its own legs and make each make a profit regardless of the other departments.

Added to this might be some observations on the desirability of sticking to as near a cash basis in dealing with customers as possible, of the cost of credit business and the importance of rate of turnover of money invested.

A few more fundamental points of good business could be developed and that need be about all. Whether the garage man gets one sign or two, or the kids a box of cheap candy on "opening day" at a new gasoline pump, could and should be left out of the discussion. These are incidents that will all be taken care of in the fundamentals that can be set forth.

When men are convinced of the fool things they do that bring them losses they will cut them out. And the oil business, like all other business, can stand for a lot of education on the plain fundamentals of good business that lead to satisfied customers and to a profit.

Multiple Pumping of Oil Wells

Article Two

Shackle Line Supports—Pumping Jacks Counter Balances

By Lester C. Uren
Professor of Petroleum Engineering, University of California

AS DESCRIBED in the previous article, the pumping power provides a reciprocating motion to a series of pull lines or rods which extend out from the power station in a generally horizontal direction, one to each of the several wells constituting the group to be pumped. Occasionally more than one well may be operated by an individual shackle line, but this is unusual. As many as 35 wells may be operated from a single power station and the more remote wells may be situated as much as a quarter of a mile or more away.

The shackle lines consist of continuous steel wire cables or of steel rods coupled end to end with screw joints. Steel hoisting or drilling cable that has passed its period of usefulness in drilling operations, or old sucker rods from pumping wells, are often used in making up shackle lines. The more modern and efficient installations employ new cables or rods of appropriate size, weight and strength, especially selected in accordance with the power to be transmitted, by careful engineering design.

The lines must be kept as taut as possible and should be of such cross-section as will successfully resist undue elongation under pumping load. Expansion and contraction, due to temperature changes, also introduce inefficiencies of this character. These are factors which contribute to loss in the effective stroke of the shackle lines unless guarded against by every possible means. They may be offset to some extent by turn-buckle or link "take-ups" at convenient points in the lines.

Many ingenious devices are employed in supporting the shackle lines so that they may oscillate freely in air, without at any point developing frictional contact with the ground, or with trees, buildings or other objects near which the lines must pass.

Where they are carried along straight lines from the pumping power to the wells, over ground that is level or nearly so, the problem of supporting the shackle lines is comparatively simple, it being only necessary to provide hold-up posts at about 50-foot intervals.

These consist of upright, braced timbers, with guide grooves cut in their tops, through which the cable oscillates. (See Figure 1). In operation, the cable and guide grooves are kept well greased.

Another simple form of hold-up device is one in which the shackle line is supported on a short piece of cable suspended vertically from a simple timber structure. (See Figure 2).

Near the power station, where there is considerable side-sweep in the lines, due to the motion of the eccentrics, the shackle lines are often boxed-in on top of their supporting posts, or supported on cables supported between widely spaced posts. (See Figure 3).

Cleaning Out Wells Next Topic

The next subject to be taken up by Prof. Uren, in his exclusive series for NATIONAL PETROLEUM NEWS on modern production practice, will be on pulling tubing and cleaning out wells. As with the present series on multiple pumping, these new articles will be fully illustrated with photographs and drawings of equipment.

A more substantial type of shackle-line support that is particularly useful where the contour of the ground is uneven, and where changes in direction of the lines in a vertical plane are necessary, is called a "rocker" or "pendulum." These devices take a variety of different forms, some of which are illustrated in Figures 4, 5 and 6. It will be noted from the illustrations that the rocker is pivoted at its lower and the pendulum at its upper end, and that they are designed to oscillate with the shackle line, to which they are rigidly attached.[2]

Where the direction of a shackle line must be changed in a horizontal plane, a device called a "butterfly" is used. (See Figures 7 and 8). This consists of a heavily braced, 90-degree triangular frame, supported in a horizontal plane and pivoted at one corner against a rigid post. A shackle line connecting with the pumping power is attached to one of the remaining two corners, and a line leading to the well to be pumped is attached to the other. The shackle

[2] Note: Many of the photographs reproduced in this article are from the graduation thesis of R. M. Barnes, Univ. of California, assembled under the general supervision of the writer. The working drawings of shackle line supporting structures have been redrawn by the writer from the same thesis.

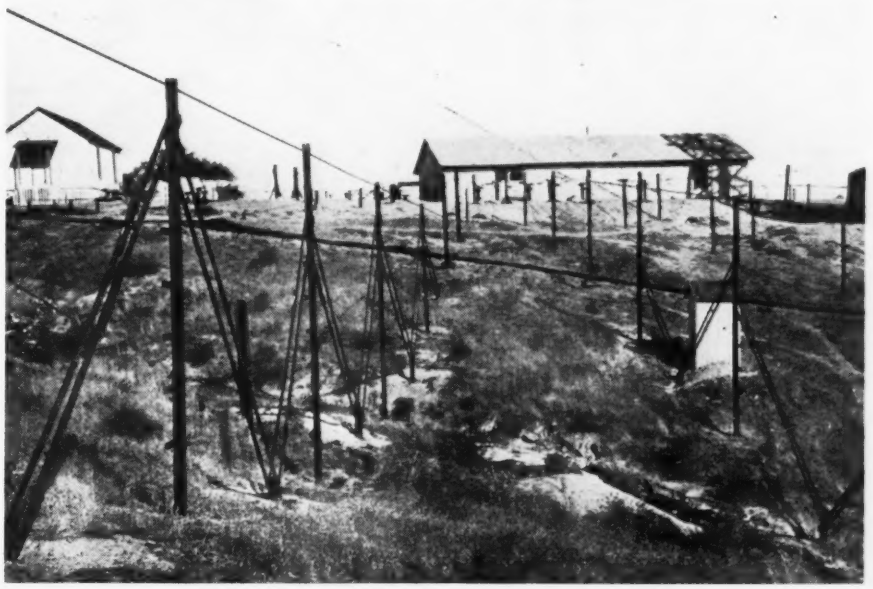

Fig. 1—Central "power" and shackle lines to pumping wells, illustrating method of supporting shackle lines

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Fig. 2

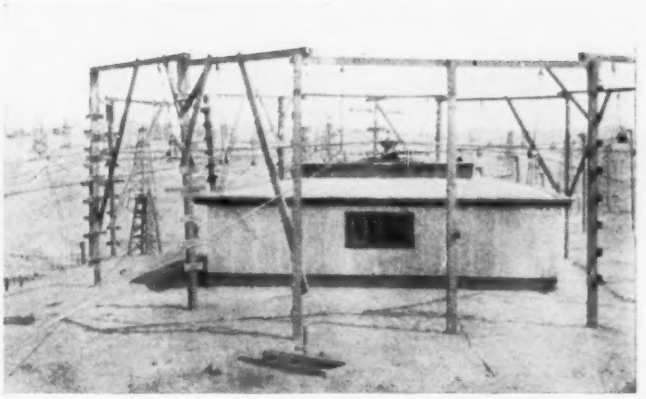


Fig. 3

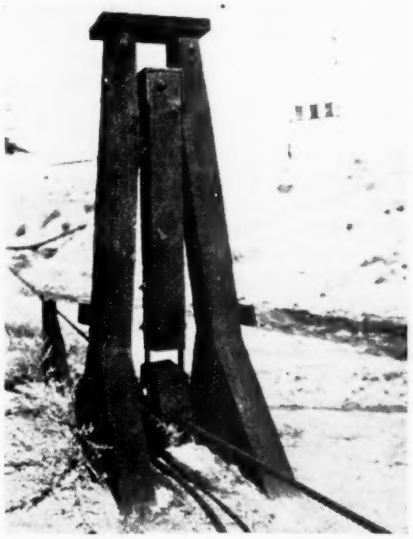


Fig. 4

Fig. 2—Central "power" and shackle lines to pumping wells, illustrating method of supporting shackle lines

Fig. 3—Central "power" plant, illustrating method of supporting shackle lines

Fig. 4—A "pendulum," a common type of shackle-line support in multiple well pumping

Fig. 5—Hold-up rocker. (The timber structure is pivoted at its lower end)

Fig. 6—Detailed design for a common form of rocker used in supporting shackle lines in multiple well pumping

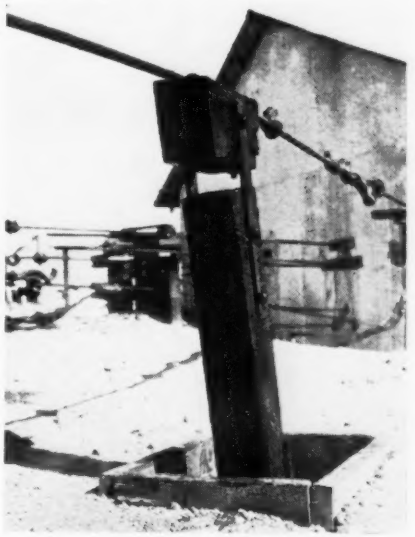


Fig. 5

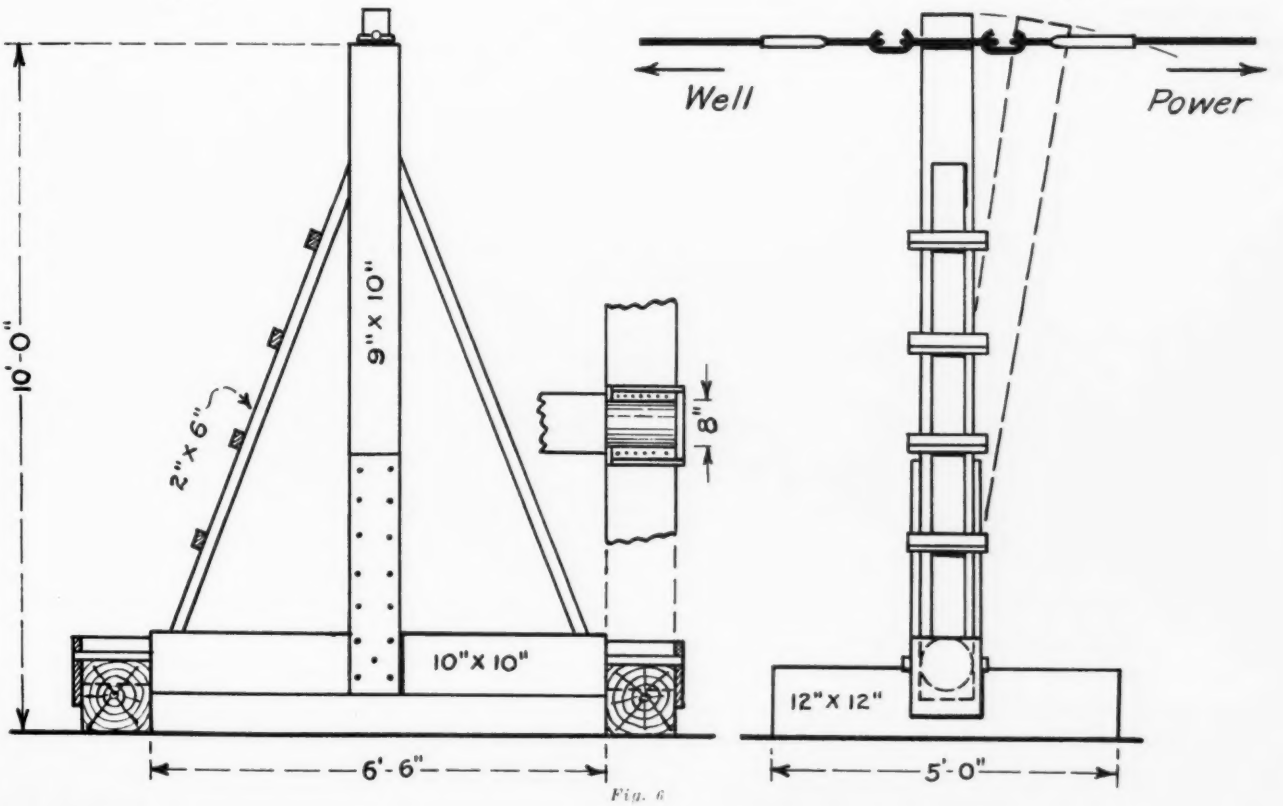


Fig. 6

Design of Butterfly for Changing Direction of Shackle Line

Fig. 7—A "butterfly" used in changing the direction of a shackle line. The photograph also shows a rocker, "R,"1 and throw-off post, "P"

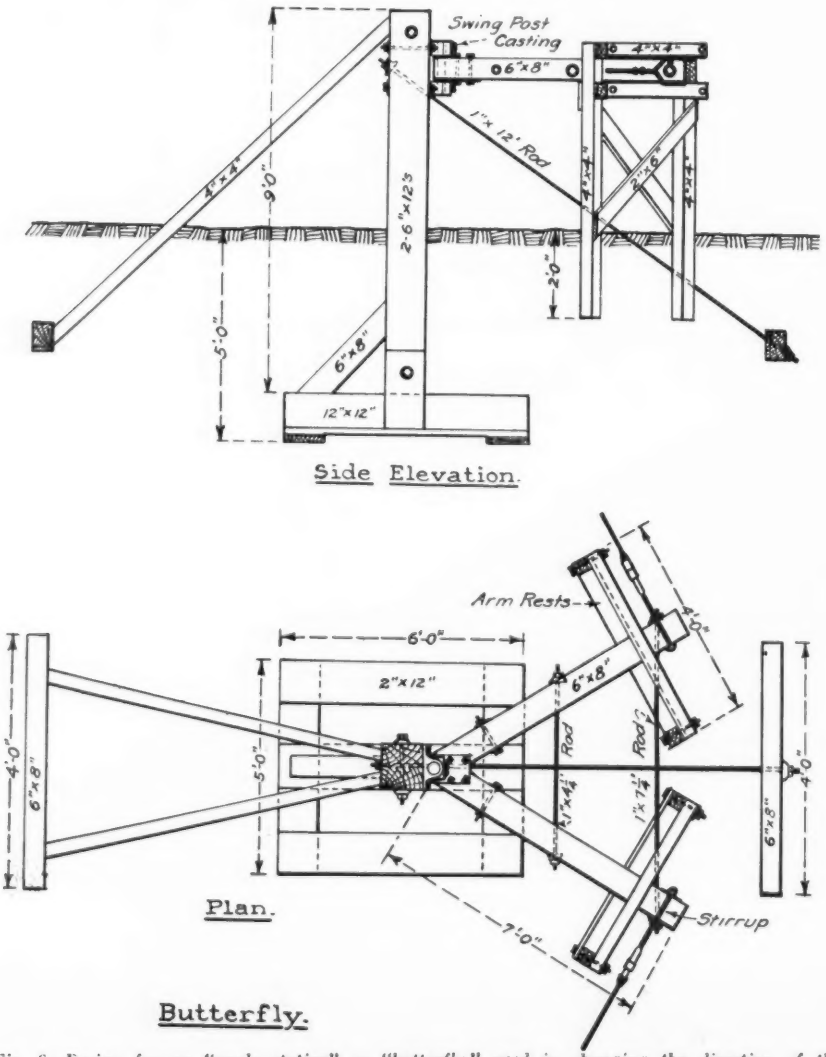


Fig. 8—Design for an "angle station" or "butterfly," used in changing the direction of the shackle lines in a horizontal plane

lines should enter and leave the butterfly horizontally. A single butterfly may serve as a power distribution center from which several different wells are operated, it being possible to attach any desired number of shackle lines to the oscillating corners.

A somewhat less satisfactory means of changing the direction of a shackle line in a horizontal plane involves the use of what is called a "hold-in swing" or a "hold-out swing," the choice depending upon the position of the support with respect to the angle formed by the shackle line. If the support is within the angle formed by the line, a "hold-out swing" must be used; if otherwise, the "hold-in swing" must be employed. The general features of the two types of swings will be apparent from the illustrations given in Figures 9 and 10.

Changing of the direction of a shackle line in a horizontal plane may be necessary as a means of securing a proper balance of forces on the central power, as explained in the previous article of this series, or it may be necessary in carrying the line around some obstruction or natural barrier, or in meeting the requirements of unusually difficult topographic conditions.

It has been shown above, that the shackle lines have a tendency to lose some part of the stroke provided at the pumping power, as a result of elastic elongation under strain, and by sag between supports due to insufficient tension, thermal elongation and other causes.

Loss of effective stroke by the shackle lines may be off-set by the use of a device called a "multiplier," which is also useful in providing for any changes from the normal stroke that may be desirable at particular wells. A common type of multiplier is illustrated in Figure 11 and another in Figure 12. It will be noted that the multiplier is nothing more than a "rocker" or "pendulum" with the shackle lines attached at two different points differing in their distance from the axis on which the device is pivoted. The line attached nearest the pivot will, of course, have the shorter stroke.

While the shackle lines may to a large extent follow the slope of the ground over which they pass, it is essential, where they first take off from the central power, that they be supported substantially in a horizontal plane, otherwise the power may be subjected to abnormal strain and wear by the inclined forces thus applied. It is usual, therefore, to place the power, when possible, on level ground.

When individual wells have to be taken off the power for cleaning or repair purposes it is usual to disconnect the shackle lines leading to those particular wells, near the power plant, where readily disengaged C-links or hooks are provided in the

lines for this purpose. A "throw-off post" is provided for each line near the disengaging hooks or link. By inserting a wooden block between the link or hook and the post, at the end of the pumping stroke of the line, the link or hooks provided will disengage. The photograph reproduced in Figure 13 shows to advantage the throw-off posts grouped about a central power.

The shackle-line supports shown in the illustrations accompanying this article, are for the most part, of timber construction, steel bolts or rods being employed to hold the timber members together. Timber supports of the character pictured can be readily assembled on the producer's lease from materials commonly at hand. There is a tendency among oil producers, however, to adopt all-steel structures where they can be purchased or constructed at reasonable cost.

Steel shackle-line supports and structures possess greater rigidity and have a longer life, with less maintenance expense, than is the case with timber structures. Certain manufacturers specializing in this class of oil-field equipment are now offering steel structures and shackle-line supports built of pipe or structural steel, that give excellent satisfaction in service.

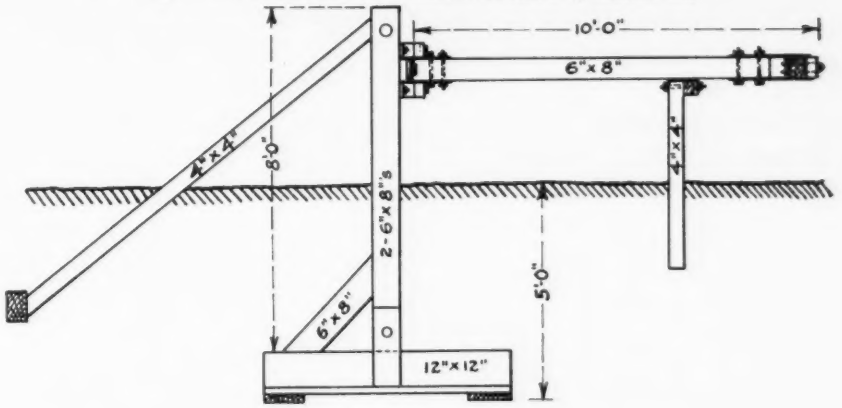
Pumping Jacks

The device employed at the well for changing the horizontal reciprocating motion of the shackle lines to the vertical, reciprocating motion of the sucker rods in the wells is called a "pumping jack." There are many different types and styles of pumping jacks in use, some of which are constructed on the lease from materials commonly at hand; while others, containing various patented features, are available through manufacturers and supply dealers.

A common type of jack is triangular in form and constructed of rolled steel sections, pipe or heavy timber. It is pivoted at one corner against a substantial post or sill situated at one side of the well. The shackle line connecting with the power is attached to one of the free corners, and the polish rod to the other. Such jacks, though widely used in the early development of multiple pumping, have been largely displaced by more complex types which provide less angularity in the upward movement of the polish rod, and a longer and more powerful pumping stroke. These advantages are secured through the use of additional members which provide greater leverage, toggle-joint movement and better balance of forces.

Most of the modern types of pumping jacks now employed are developments of the so-called "Oklahoma" type of jack, in which the triangular frame of the jack is indirectly connected to the polish rod through a beam pivoted at one end. Provision

Fig. 9—"Hold-in swing" for changing direction of shackle line



Side Elevation.

Plan.

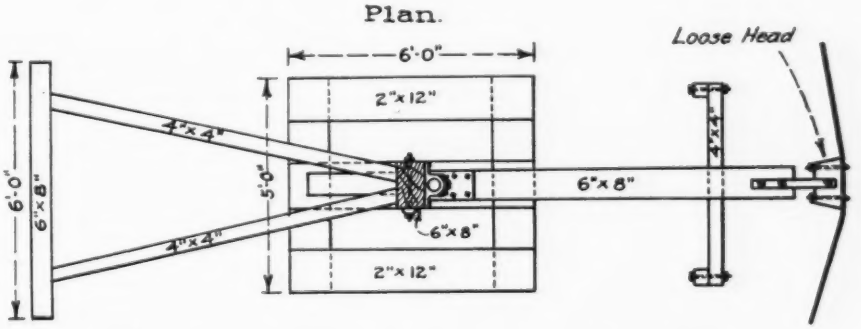


Fig.10. Hold-out Swing or Horizontal Rocker.

is generally made for varying the length of stroke of the polish rod by devices which permit of adjustments of the positions of bearings and connections which, in effect, change the relative lengths of the power and work arms of the jack.

Figures 14, 15, 16 and 17 illustrate a few of the more modern types of jacks that are finding extensive use in modern multiple pumping. The Jensen "Straight-Lift" Jack, shown in Figure 13 is successful in securing rectilinear movement of the polish rod and a long stroke. A stroke as great as five feet is said to be possible with this jack, when a 24-inch motion of the shackle line is provided. It is a powerful jack, capable of lifting oil from depths as great as 3500 feet. In some models, an extension on the beam makes possible the use of a counterweight, which aids in equalizing strain and in securing a more uniform pumping stroke.

The Goble Jack, utilizes the "varied leverage" principle. (See Figure 14). Through the use of a chain connection with the shackle line, the links of which mesh over a curved contact plate on the jack, the point of application of the power with respect to the supporting pivot remains approximately constant as the triangular frame alters its posi-

tion. The result is said to be a more uniform lifting force.

This jack, by its peculiar construction and position of the fulcrum on which it oscillates, is capable of a long stroke, in some models being as great as 5 feet 4 inches. It is of heavy construction, and is capable of pumping the deepest of wells operated by multiple power. A counter-weight assists in securing smoothness of motion.

The Lightning Balance Jack, (Figure 16) is also a popular type. A straight lift is provided on the polish rod, and the heavier patterns are capable of a 50-inch stroke on a two-foot shackle line movement. The Kansas City Hay Press Co., maker of this jack, also manufactures the novel type of jack illustrated in Figure 17.

Some producers prefer to use a wheel for converting the horizontal motion of the shackle lines to the vertical motion of the polish rod. A large wooden wheel mounted in a vertical plane, grooved around its circumference, and with one edge or face of the wheel in line with the polish rod, is used as a guide and carrier for the shackle line, the line being carried over the top arc of the wheel and attached to the top of the polish rod. The wheel is, of course, pivoted at its center so that it may revolve to and fro with the oscillation of the shackle line. Such a device has the advantage that it provides a straight upward pull on the polish rod, but it makes no provision for adjusting the length of stroke.

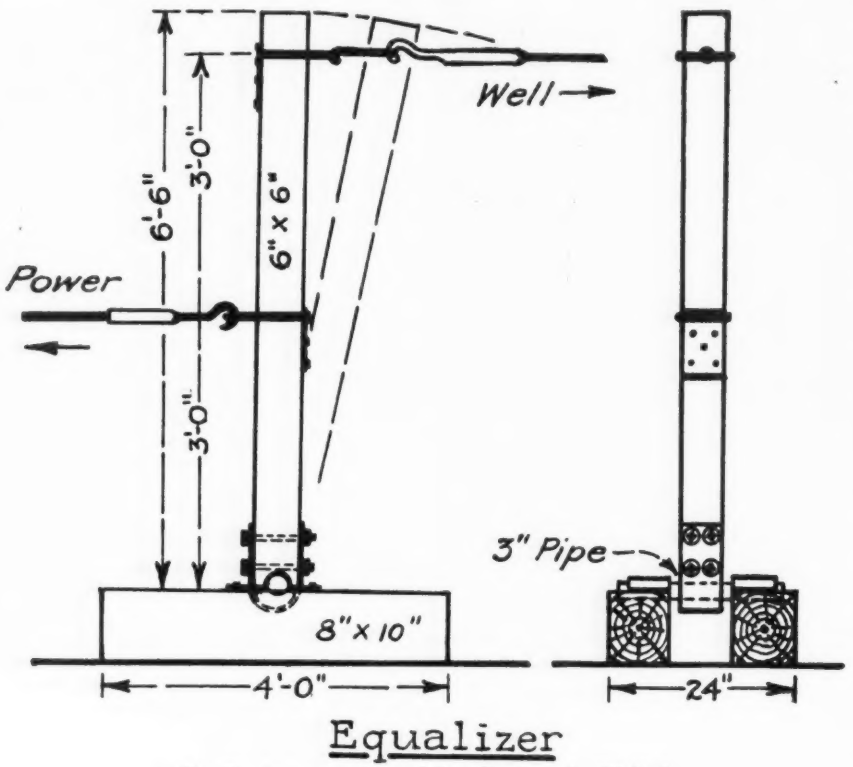


Fig. 12—A common type of "equalizer" or "multiplier"

Counter-Balances

Occasionally a system of shackle lines on a central power may not be accurately balanced unless an additional load is added to the system at some point. For this purpose a counter-balance may be provided. As illustrated in Figure 18, this usually consists of a timber frame built in the form of a rocker, with a timber box filled with bowlders or scrap metal attached to one side of it. A shackle line is attached near the top of the rocker and the frame itself is pivoted at the bottom.

Counter-balances are often required when additional wells are to be added to a multiple pumping system previously in balance with a smaller number of wells. They are also useful in keeping the shackle lines taut in operating tail pumps or shallow wells in which the weight of the sucker rods would not be sufficient to keep proper tension in the shackle lines on the down stroke of the pump without assistance.

Multiple Pumping System in Which Beam-Pumping Equipment At One Well Is Used to Operate Shackle Lines to Near-by Jack-Pumped Wells

When but a few wells are to be pumped, one of the group may be

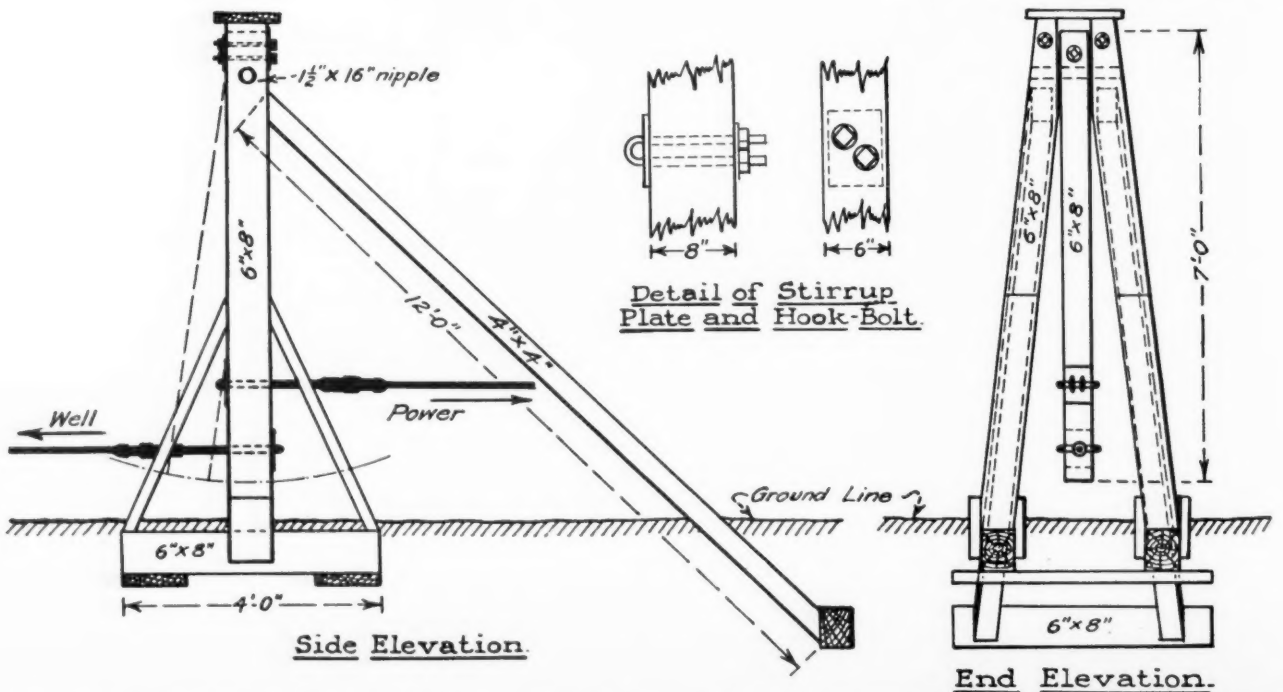
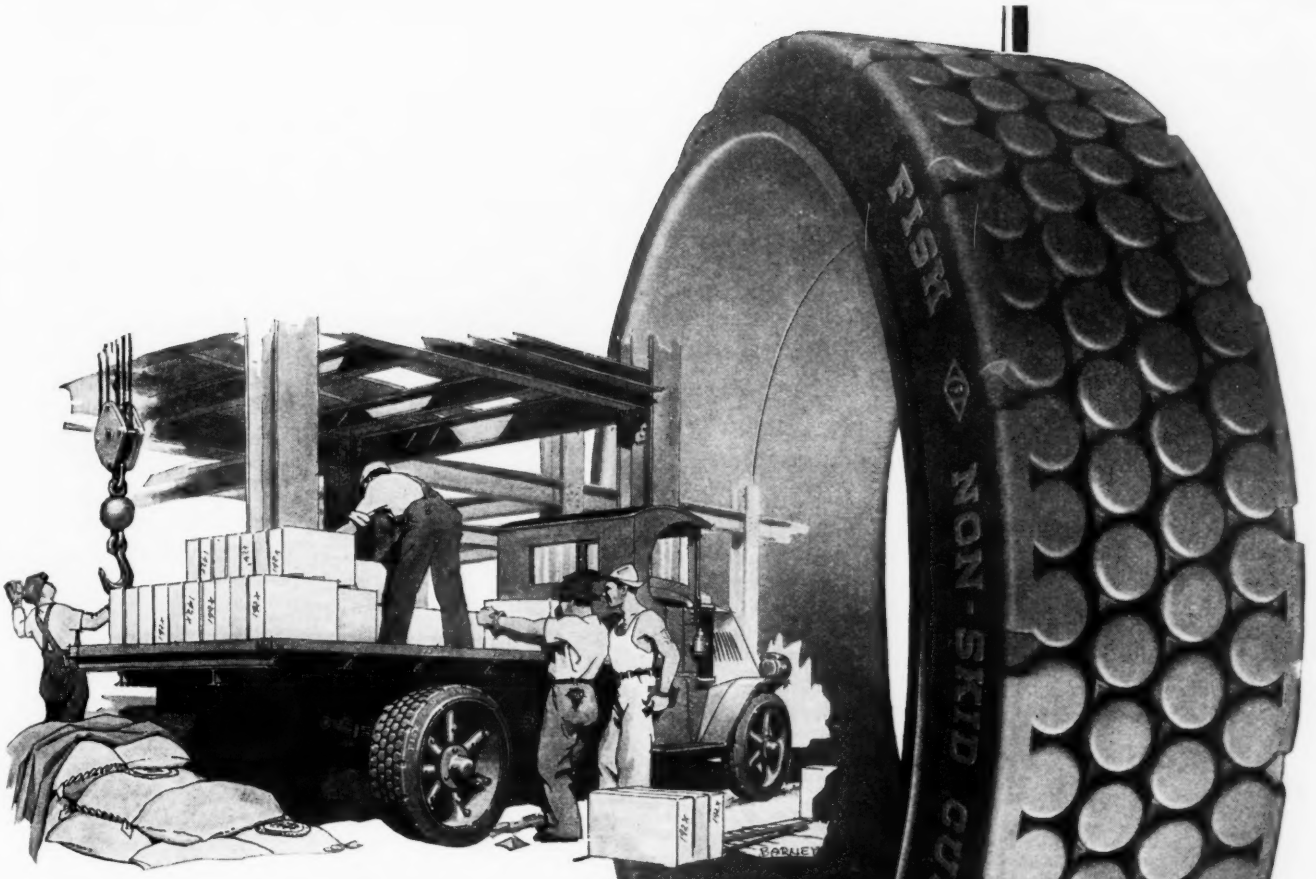


Fig. 11—Illustrating method of using a "pendulum" as a "multiplier" or "equalizer" in increasing the length of stroke of the shackle lines



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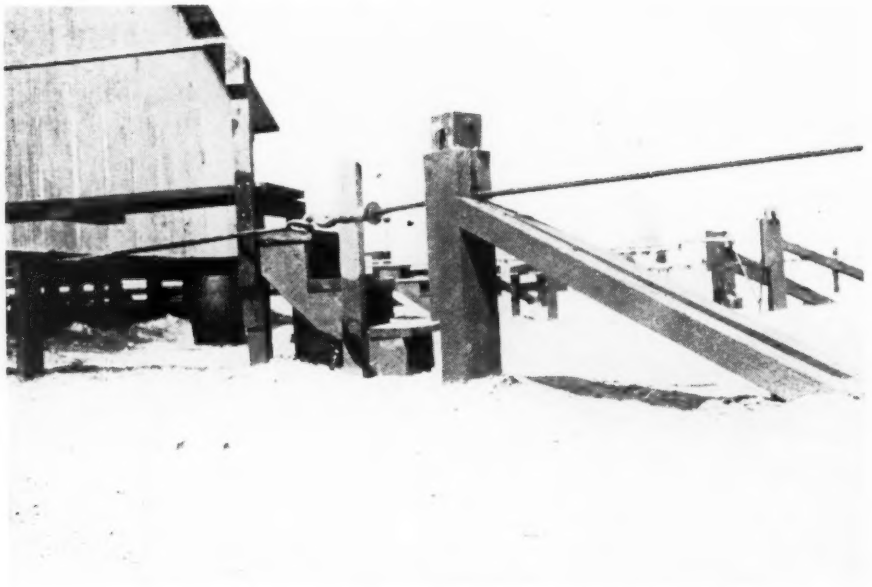


Types of Pumping Jacks In Oil Field Use

Fig. 13—"Throw-off post" and hook for disengaging shackle line from power

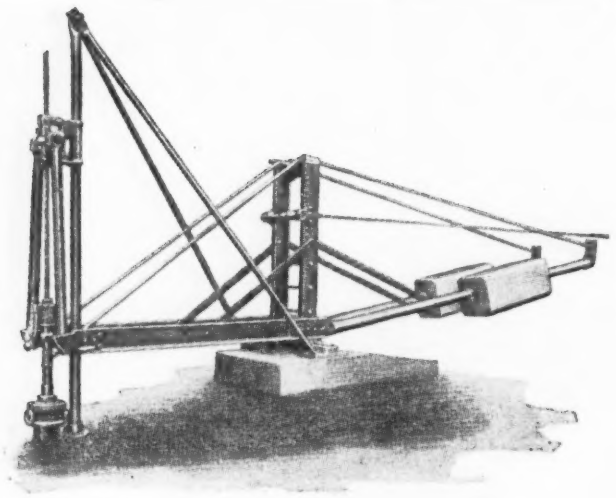


Fig. 16—The "lightning" balanced pumping jack

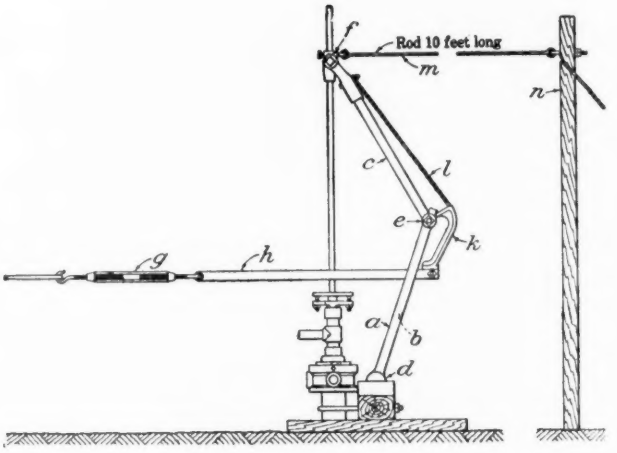


Fig. 17—"Lightning" jack manufactured by Kansas City Hay Press Co. (After H. C. George in U. S. B. Mines Bull. 224) a, b, and c, tubular steel legs; d, bearing; e, hinge joint; f, bearing and coupling; g, turnbuckle; h, stirrup; k, bearing iron; l, steel cable; m, fulcrum rod; n, braced post

Fig. 15—Goble "Variable Leverage" pumping jack

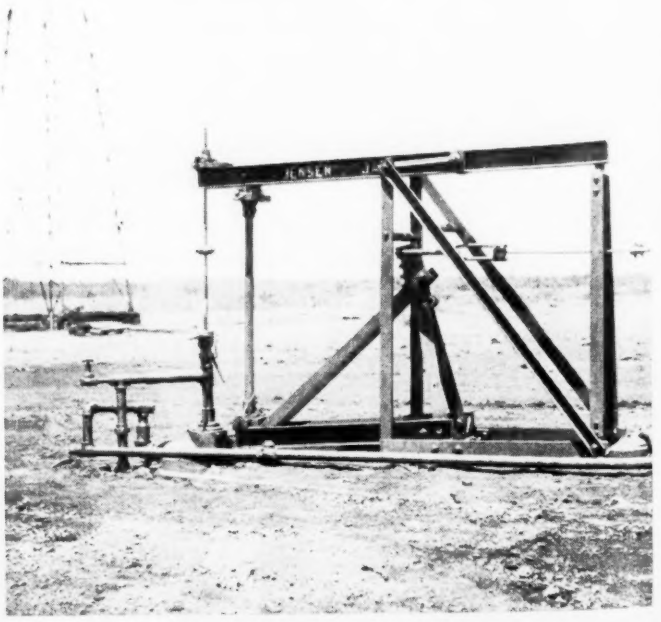


Fig. 14—Jensen "Straight-Lift Pump" Pumping Jack

The Editors' Viewpoint

National Petroleum News

Kerosene is Still "Exploding" in Stoves

"EXPLOSIONS" of kerosene when used to start fires in stoves, continue to occur and oil companies are sued and are threatened with suit because their kerosene is "explosive."

Years ago the oil industry put the kerosene consuming public on legal notice that no kerosene fit to burn in a lamp is a safe product to be used for starting fires.

Oil companies put a notice to that effect on the back of all tank wagon tickets and a movement was well under way for legislation making it a misdemeanor for anyone to start a fire with an inflammable liquid.

But as gasoline gallonage has grown and the kerosene business has shrunk the good work seems to have gone by the board. However, it is still of enough importance to warrant the industry taking it up in united fashion. The law suits may not be very numerous but when they come up they are costly because the court records are shy on successfully defended suits of this character. Generally the larger oil companies have preferred to settle out of court.

"Explosions," so called by the heirs of the deceased in the case and the newspapers, are due to many things all other than the kerosene; if the fire box was absolutely cold then the fire may get started in such a way as to vaporize some of the kerosene on the rest of the wood and coal which, uniting in just the right proportion with the air in the fire box or flue, explodes, or at least blazes up quickly into the face of the careless housewife; this "explosion" or quick blazing up may find the fire lighter with the kerosene can still in her hand over the fire box, which can is promptly dropped onto the fire as her hand or face is scorched by the rising flames; or perhaps there were live coals in the fire box when the kerosene was poured on and by the time the lighted match is applied the kerosene has thrown off enough vapor, due to its being heated, to form a good explosive mixture in the stove.

It used to be quite a stunt when the writer was a kid to so handle the kerosene in the kitchen range that when you lit the fire you would get enough of an explosion to make the stove lids rattle, and if you were adept enough you could blow them all off the stove. That generally deposited considerable soot and got one into trouble with the hired girl but as a variation to the monotony of a boy's life, it was considered worth while.

But all this is seldom, if ever, brought out in defending such suits. The oil company is supposed to have money; the kerosene had "explosive" in it, generally alleged to be gasoline, and the heirs need the money, with which thought the jury agrees.

There is still a considerable portion of the farms of the country lighted with kerosene lamps. From such a farming district came to NATIONAL PETROLEUM NEWS the other day an appeal from a small oil company as to what to do, it being threatened with suits over some kerosene which "exploded" in a kitchen stove or two. The jobber said that he had been marketing 42-44 gravity kerosene but that his competitors were marketing a 40 or 41-43 gravity oil and he was afraid they would make capital out of it and undertake to prove how "safe" their kerosene was.

It isn't the gravity of the kerosene that makes any difference but the flash point and there isn't a kerosene sold in this country that hasn't a much higher flash point, as required by state laws, than any used for years in the export trade and which seems to be equally "safe" in every other country of the world but ours. But that is politics.

We wrote to this oil jobber along the lines just indicated. In his reply he gave this most interesting fact which bore out our argument, that the state oil inspector, without the knowledge of this oil company, had obtained a sample of the "explosive" kerosene and found it complied with the state's test—in other words that no gasoline had gotten into it by mistake. The kerosene had simply been misused.

We suggest to the oil industry that through the American Petroleum Institute, a survey might be quietly made of the cost to the industry of these unfair claims and lawsuits and if they amount to as much as we think they do, that a plan of defense with the necessary scientific facts be compiled and distributed to the oil companies, that the industry may at least start an effort to protect itself against this misuse of kerosene.—W. C. P.

Turn Down Automobile Clubs

THIS is the season that automobile clubs strive to build up their membership and many want to do it at someone else's cost—particularly the oil companies'. The old plea that gasoline gallonage would be drawn to the oil company that gives an automobile club a special discount for its members is being renewed. That plea was recently turned down by the Ohio Petroleum Marketers' Association and rightly. An automobile club that has to be subsidized in order to live, does not deserve to live.

When the plea is made in your town, put it up to the merchants, manufacturers and other business men who are in the club that you really think it would be a fine idea if each of them would give a special discount to members in the automobile club.

There is no reason in the world why an automobile manufacturer or retailer should not give a special discount to all club members who buy cars at his place. Ditto for tire dealers. Ditto for the dry-goods stores. Ditto for deposits at banks. Ditto for the druggists. Ditto for the dentists and there might be even a ditto for those automobile owners who will also join a church.

In fact if the oil men were to search the town they probably could find many very alluring propositions which could be held out to members of automobile clubs. Such propositions also would concern members of all other clubs that seek this kind of subsidy.

When this is done in all seriousness and with great energy and salesmanship, there is every reason to believe nothing more will be heard of the plea to the oil companies to give the clubs a subsidy.—W. C. P.

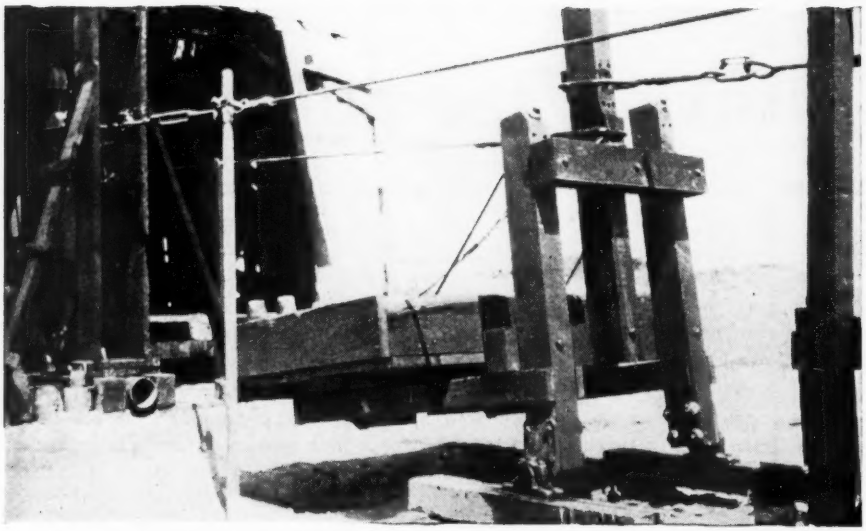


Fig. 18—Counter-balance for holding tensing in shackle line near a pumping well

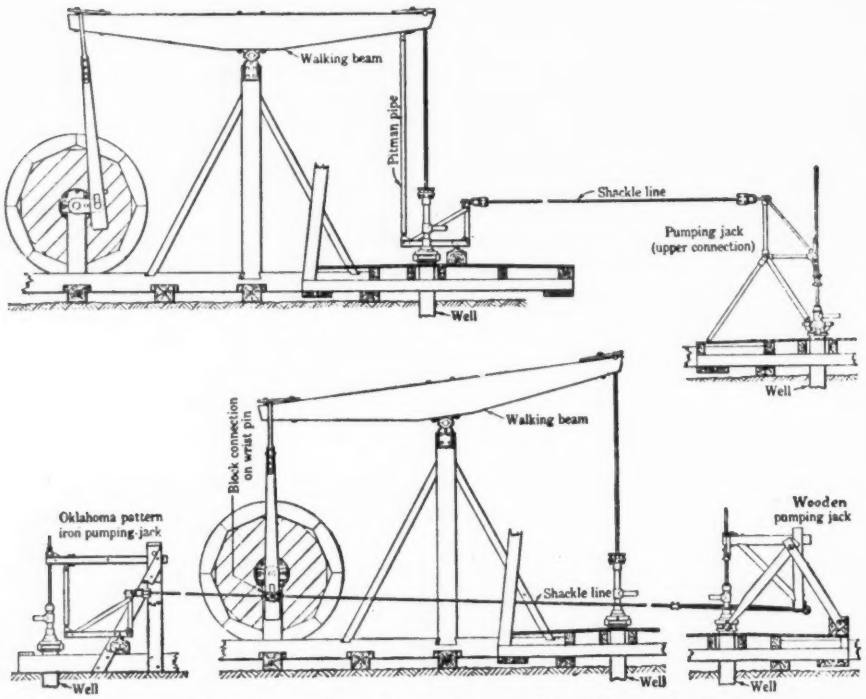


Fig. 19—Sketches illustrating method of multiple pumping with shackle lines from beam-operated well. (After H. C. George in U. S. B. Mines Bull. 224)

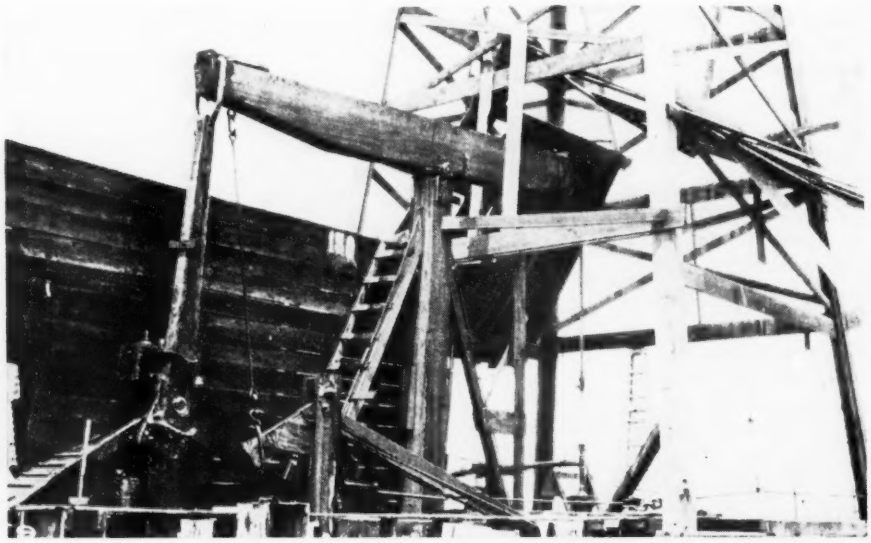


Fig. 20—Illustrating method of operating a shackle line from a beam-pumped well

equipped with an engine or motor and the usual type of beam-pumping equipment, and near-by wells operated with shackle lines attached to a sleeve on the crank or connected through a butterfly mounted in a vertical position with the crank-end of the walking beam. (See Figure 19). The photograph reproduced in Figure 20 illustrates two methods of connecting the shackle line at the beam-operated well.

Economy of Multiple Pumping

Under favorable circumstances, the multiple system of pumping becomes far more economical than the ordinary beam or unit-pumping systems. The power consumption per well averages between two and three horsepower when this system is used or, generally, less than a third that necessary in pumping wells on the beam with individual power plants under otherwise similar circumstances.

The cost of operation per well per day is therefore greatly reduced. The installation cost of a multiple pumping system is also considerably less than beam pumping installations, costs per well being seldom greater than $1000 when the multiple pumping system is used,[3] while with a separate power plant at each well, the installation cost is from $2500 to upwards of $3000 per well.[4]

Summary

This is the second of two articles reviewing recent progress in the development of the multiple system of pumping oil wells. The first of the two was devoted to a discussion of the general features and advantages of the multiple system and to a description of the various types of pumping powers employed. In the present article, some of the many more modern types of shackle line supports and pumping jacks have been described. It has also been shown that the multiple system of well pumping, under favorable circumstances, is the most economical method yet devised of applying mechanical power to the operation of oil wells. The method, however, may only be efficiently employed in the operation of closely spaced, comparatively shallow wells, of low productivity, in which the necessity for cleaning and making well repairs is of but infrequent occurrence.

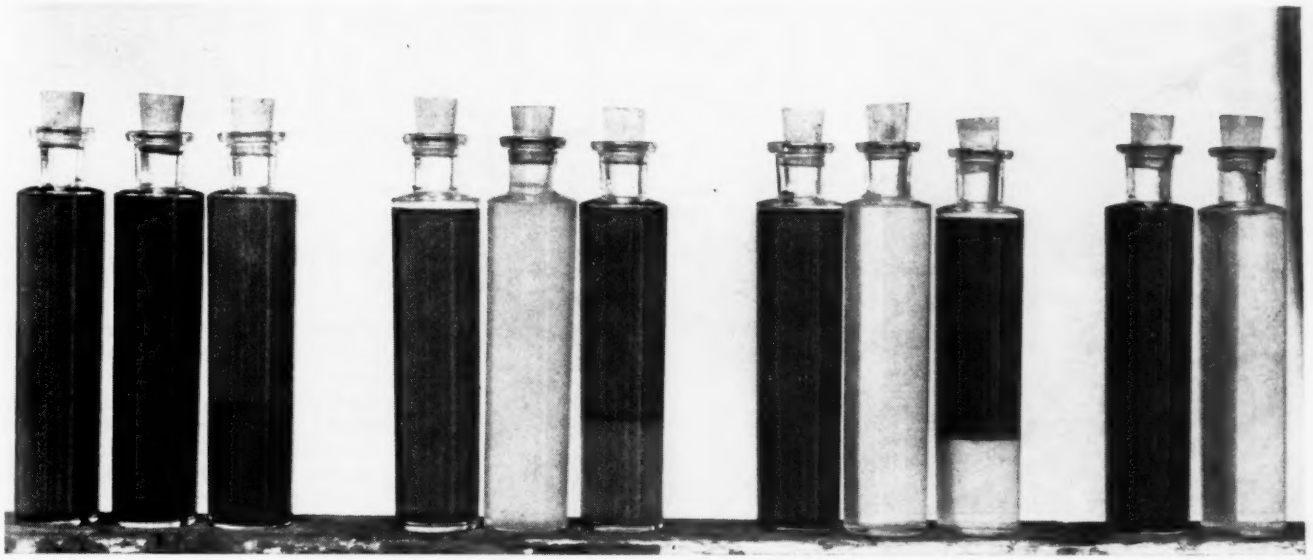
[3] George, H. C., "Surface Machinery and Methods for Oil-Well Pumping," U. S. Bureau of Mines Bull. 224, 1925.

[4] Shaw, S. F., "Costs of Lifting Petroleum." Lefax pamphlet.

One company operating as contractor to the government for carrying air mail has covered a total distance in the air by 25 pilots which is equal to more than 285 times around the world. In flying hours it totals 8¾ years in the air.

Distillate Is Its Own Induction Pump In Continuous Treating System

By Paul Truesdell
N. P. N. STAFF WRITER



Showing how treating reagents settle out of the raw Stellarene (yellow naphtha). Numbering the bottles from the left. No. 1 is raw yellow naphtha; 2 is caustic solution, and 3 shows the separation—yellow naphtha above and caustic below; 4 is caustic treated yellow naphtha; 5 is hypochlorite solution; 6 is yellow naphtha above, hypo below; 7 is caustic and hypo treated yellow naphtha; 8 is water; 9 is finished yellow naphtha above, water below; 10 is finished yellow naphtha; 11 is wash water

CLEVELAND, Aug. 16

A TREATING system for cracked gasoline which is simple and compact and is said to be very efficient, has been developed by W. G. Leamon, president of the Leamon Process Co., and the Stellar Refining Co., and R. M. Parsons his chief engineer.

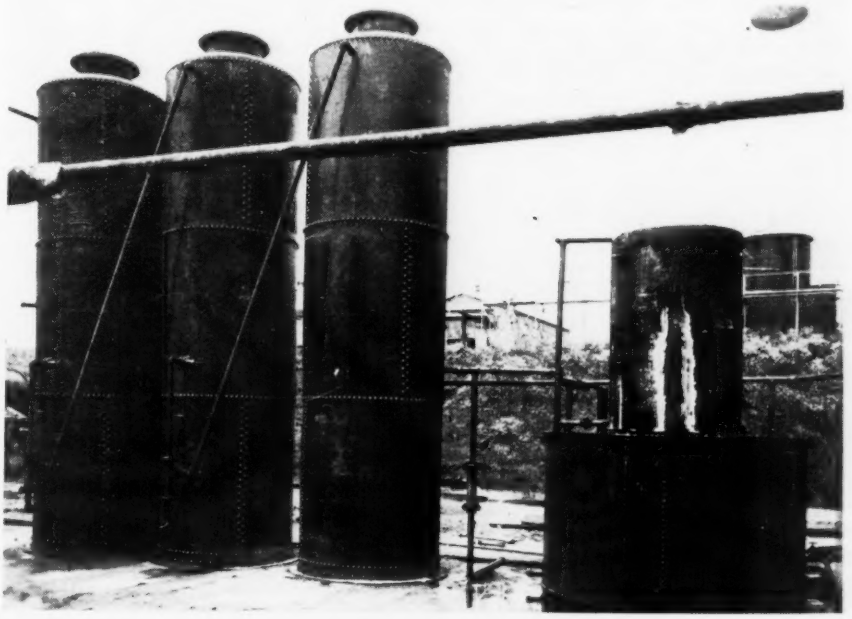
The system is equally satisfactory for treatment of straight run gasoline or any oil which responds to the hypochlorite process, it is stated.

I saw the process working at the plant of the Stellar Refining Co., Newark, O. It is used there for treating Stellarene, a vapor phase cracked motor fuel, for sulfur. The treating agents used are caustic soda and sodium hypochlorite. It is used for treating batch at the Stellar plant but it can easily be modified to carry on continuous treating and to use other treating reagents.

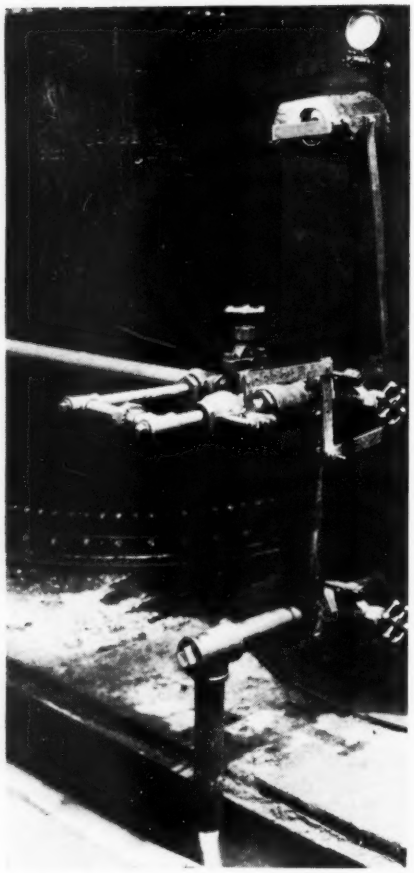
The system is charged with the reagents and the oil undergoing treatment is pumped through continuously until the reagents are no longer potent. The spent chemicals are then withdrawn and fresh charged into the tanks. The oil undergoing treatment is then pumped through the system continuously.

The feature, according to Mr. Parsons, is that treatment occurs until the reagents are no longer potent; the solutions are used over and over again until they no longer produce the desired effect.

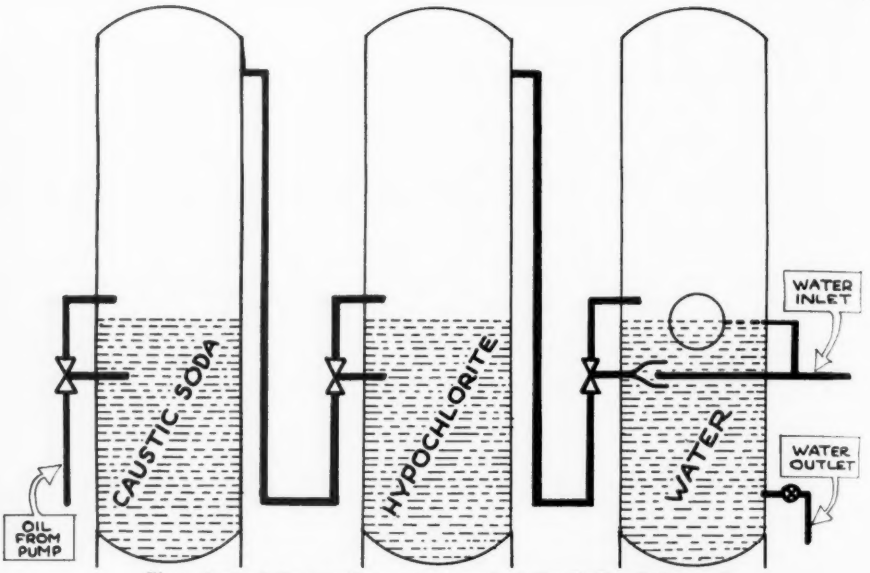
The treating plant consists principally of three 5 by 20-foot vertical tanks, and three venturi mixers. Description of the process can best be given by reference to the accompanying Picture 1. At the extreme right are the hypo and caustic mixing tanks, the rich hypo tank and the weak hypo vat only being visible in



Picture No. 1—At extreme right, rich hypo and weak hypo vat. Next to these, at the left, is the caustic treating tank; next to that the hypo treating tank and the third tank is the water wash tank



Picture No. 2—The liquid level control which governs the depth of water in the wash tank



Flow sheet of the treating process used at the Stellar Refining Co.

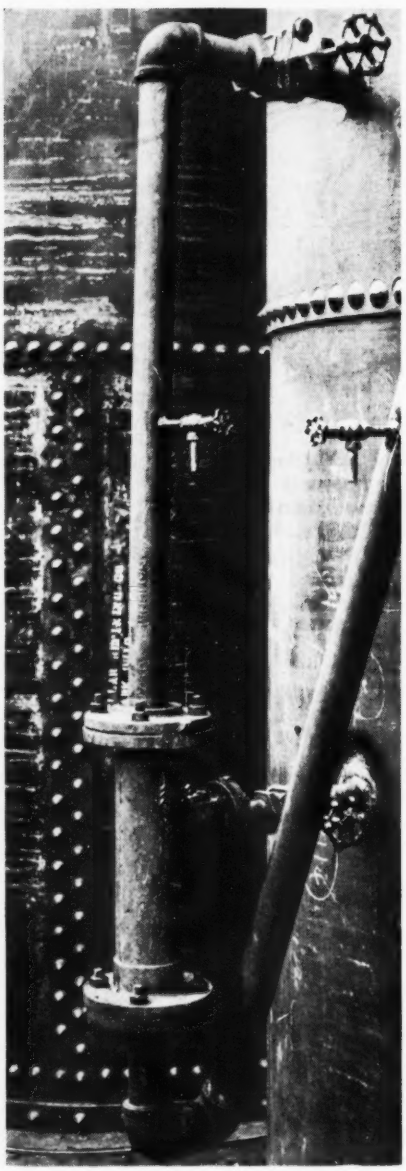
the picture. The tank next to the hypo vat is the caustic treating tank, next to that is the hypo treating tank and the tank at the extreme left is the water wash tank.

As described by Mr. Parsons, the feed pump serves also as a charging pump for pumping the caustic into the caustic treating and into the rich hypo tank. The feed line can be seen coming out of the pit, in the concrete floor, passing horizontally and then rising to the special venturi mixing ejector. By suitable valve control the caustic will flow to the treating tank at the left or pass to the rich hypo tank through the horizontal pipe above the venturi mixer.

In starting the plant, the caustic treating tank is charged with caustic to a level of 4 feet. The hypo treating tank is charged with hypo to an equal level. The level in the water tank is maintained at approximately the same level by means of a liquid level control.

While the treating system is very simple it took a great deal of careful mathematical calculation to get it to work just right.

Here is how it works. A pump drives in the untreated distillate through the venturi tube. The throat of the venturi, the size of the caustic pipe and the velocity at which the distillate is pumped through are carefully calibrated so that the passage of the distillate stream through the



Picture No. 3—One of the venturi mixers. Pet cocks for taking samples are shown in the slanting pipe and in the riser above the mixer. It is said that a sample of oil from the slanting pipe, which carries the oil into the hypo mixer from the top of the caustic treating tank, shows no trace of caustic solution

venturi will siphon out into the stream just the desired amount of caustic solution.

Treating is carried on in the Stellar plant at the rate of 50 gallons a minute. Larger capacity would be gained, of course, by using a larger venturi and increasing pump speed.

Distillate and solution are thoroughly mixed in the venturi (in this case 70 per cent of distillate to 30 per cent of caustic solution) and the size of the orifice and speed of the stream are so calculated that the emulsion of the treating agent and distillate is made up of uniform sized globules throughout.

The caustic-distillate mixture is discharged into the tank through the horizontal pipe and rises until it reaches the opening of the slanting pipe near the top of the tank. More mathematics. The tank is made of such size that all of the caustic soda solution settles out of the distillate before it reaches the overflow pipe, so that a sample taken through the pet cock which is shown near the bottom of the slanting pipe will be pure oil with no trace of caustic soda, Mr. Leamon says.

The bottom of the second tank is filled with hypochlorite solution and the distillate, freed from caustic, is mixed with the hypo while passing through the second venturi, the same way that the mixing with caustic is accomplished in the first tank. The distillate hypo mixture then enters the tank and rises to overflow into the outlet line, the hypochlorite settling out completely before the distillate reaches the top so that a sample taken from the pet cock in the second line is free from hypo.

The bottom of the third tank is filled with water, as before stated, to a depth of about 4 feet. This tank is fitted with a liquid level control which operates a valve to regulate the inflow of water. This tank is fitted also with a venturi mixer which makes a thorough mix of dis-

America's swift rise to economic supremacy, authorities agree, has been due in large measure to the fact that *obsolescence* rather than *wearing out* governs the purchase of new plant equipment

The refiner who plugs along with inefficient cracking equipment simply because "he has his money tied up in it and it isn't worn out yet" is trying to buck an economic law which is likely sooner or later to bankrupt him

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

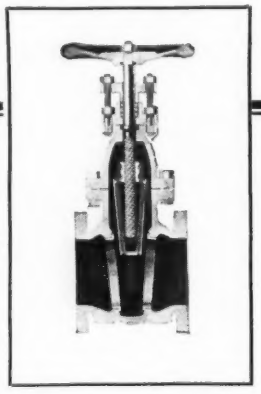
Gottkool
WATER CANS & COOLERS
GOTT Water Cans are built to last. They keep water pure, cool and always near, saving time lost in getting a drink. Made in 1, 3, 5 and 10 gallon sizes.
GOTT Water Coolers, 3, 5, 6, 10 and 20 gallon
Order from your supply store
H. P. GOTT MFG. CO.
Winfield, Kansas
KEEP PURE WATER ALWAYS HANDY

Gray Treating Towers

M. W. KELLOGG CO.
7 Dey Street ~ New York

Kansas City, Mo. . . . . 700 Baltimore Ave.
San Francisco, Cal. . . . . 444 Market St.
Los Angeles, Cal. . . . 329 Petroleum Sec. Bldg.

Sectional view, Fig. 326, Jenkins Standard Iron Body Gate Valve, flanged.



Every part plays its part
in the long life of a Jenkins Valve

A sectional view of any Jenkins Valve reveals the even distribution of metal . . . . the ample wall thickness for the pressure rating of the valve. The globe-shaped body is in conformity with the principle of maximum strength against internal pressure in spherical bodies . . . . so also is the round oval neck.

Manganese bronze spindle offers the ideal combination of long-life and shock-resistance.

Jenkins Iron Body Gate Valves are made in standard, medium and extra heavy patterns . . . . screwed or flange. Send for our Iron Body Valve folder.

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tillate with water. The pipe through which the water is siphoned into the stream enters the middle of the venturi as do the pipes that introduce the treating reagent into the other two venturis but terminates inside the tank in a funnel.

The water inlet pipe opens into the funnel but there is a space left between the end of the pipe and the walls of the funnel. A water outlet pipe keeps the water at a constant level. The lowering or rising of the water level actuates the float which opens or closes the inlet valve to let in more or less water. If the stream of water coming in through the inlet pipe is not sufficient to satisfy the draft on the venturi, the funnel picks up water from the bottom of the tank sufficient to fill the requirements.

Picture No. 2 shows the liquid level valve control mechanism including the stuffing box in which the shaft passes through the side of the tank and the water outlet pipe at the bottom. A flow sheet of the process is shown on page 66.

Mr. Leamon says that the same system could be adapted to sulfuric acid treating or doctor treating and that it could be made continuous by putting a liquid level control similar to the one on the water tank in this system on each of the tanks.

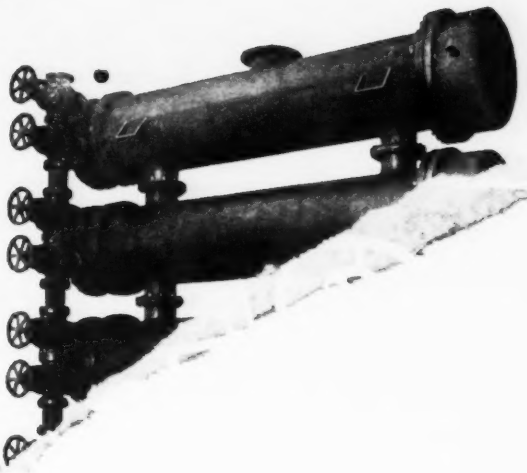
Only one pump is required for the whole system and it performs the following functions:

(a) Charging rich hypo vat
(b) Charging caustic treater
(c) Charging hypo treater
(d) Drawing distillate from storage, pumping it through the treating plant and discharging it to storage.

The venturi mixer is of special design with the parts removable and so proportioned that the resistance to flow is very low, the orifice is extremely small and of such arrangement that the treating reagent induced into the mixer, completely envelopes the distillate, which caused the induction and then completely mixed with it, passes on through a hole no larger than one's little finger. It is upon this device that the treating success depends, says Mr. Parsons, who adds that tests have shown the treating capacity of the solutions to be as much as five times that attainable with agitator treatment, and in addition because the process is a closed one the evaporation loss is zero.

RICHMOND, Va., Aug. 17.—With the opening of its station at 5011 Grove Avenue, O. M. Luck manager, the Morgan Oil & Supply Co. now has three super service stations in operation in metropolitan Richmond. The main office of the company is at 1324 North Boulevard and its other station is located at 2307 Chamberlayne Ave. Morgan Oil & Supply Co. is distributor for Tydol gasoline and Penreco motor oils.

Condensers for every service



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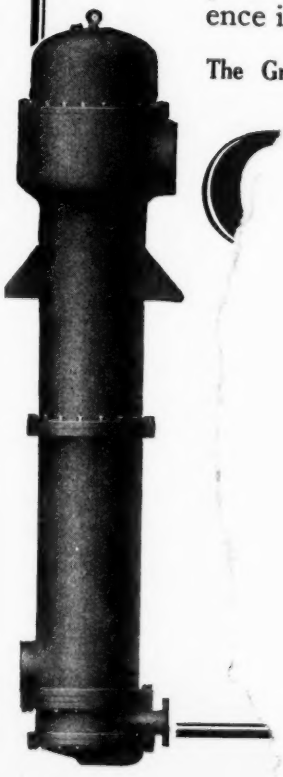

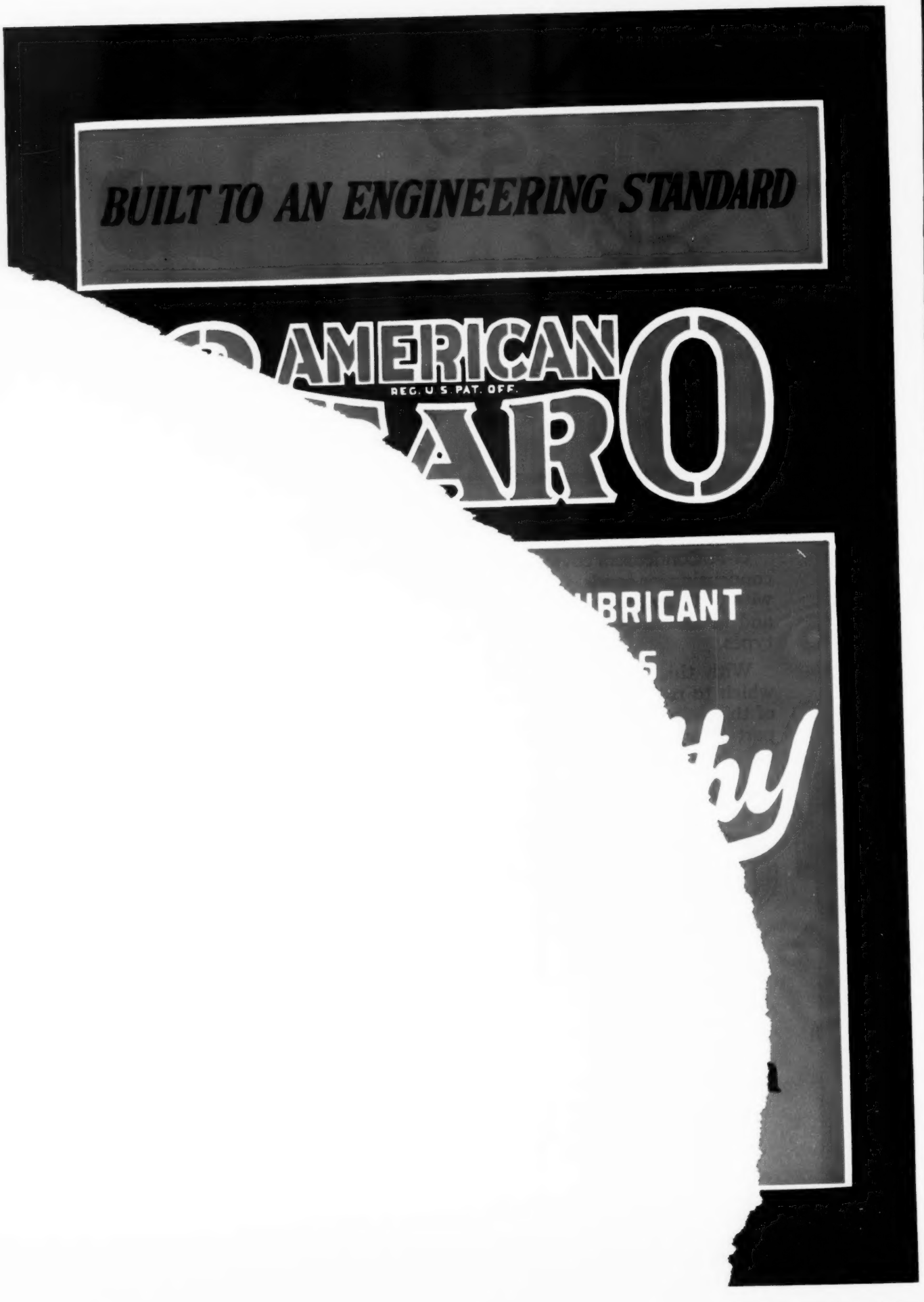
BUILT TO AN ENGINEERING STANDARD
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The average motorist doesn't have to do this to his car any longer

Listen!

You Can Hear Dollars in Profits Rolling Down the Street

*By Jack Nourse**

THE average motorist wants to be a good customer of a good chassis greasing service. He doesn't repair his own car any longer. He doesn't even change a tire if he can help it. He doesn't patch his own tubes. He has his car serviced in these matters.

He doesn't even grease his car himself any longer. He lets the car run ungreased longer than he should because he does not realize and no one tells him the damage he is doing his car thereby.

First make sure that your stations are furnishing an entirely adequate lubrication service. Then show your customer how good your service is. Then talk to him about the added riding comfort and the extra months for life he is adding to his car in common sense language and you'll open up a new avenue for profits at your stations.

This is Jack Nourse speaking. He's head of the Nourse Oil Co., Kansas City, and a pioneer in the oil industry—though not in years—in making and selling grease for automobile lubrication. He wrote this article at the request of the editors.

WHY did you sell your last car? A dollar to a doughnut, that old motor was purring beautifully—you thought it was a shame to trade it in. The trouble was that it was squeaking and rattling and bumping and jolting, it was costing you a dollar here and a five there, and the repair bills simply "ate it up."

The reason—your chassis had not been lubricated properly—bolts and nuts had not been kept tightened—the little things that were neglected cost you the price of a new car.

Maybe, being an oil man, this didn't happen to you. Probably, in spite of the fact that you are an oil man, it did happen to you. If it happened to you, think of the millions of motorists throughout the country who are experiencing the same thing.

Think of the saving to them, through an extra year or even two or three years, service from the same car—and through the simple lubrication of their chassis.

One hundred to five hundred dollars extra profit per month has been easily made by a number of oil dealers and jobbers in the middle west, simply by greasing chassis for their customers.

JACK NOURSE

We want to awaken more dealers to the opportunity of this comparatively new field. Probably not one car out of 100 is properly lubricated, so far as the chassis is concerned, so the field is unlimited. From the motorists' standpoint, fully 90 per cent of the repairs that he pays for, are due to improper chassis lubrication.

Motorists want it—they have quit cranking their cars, they have quit patching their tubes—they take them to the repair shops. They even refuse to change from one rim to another—they call a tire company and have it done for them.

They have tried to repair their cars—they have given that up. They have tried to grease their cars and they have given that up. They let them go ungreased rather than do it themselves. No one can blame the motorist. The first thing he must do is to change clothes. Otherwise, he'd ruin enough clothes to pay for greasing the car almost its lifetime. Then he has to crawl under. He doesn't know what this is for or what that is for. He doesn't know where to grease and where not to.

By the time he gets through, he has grease on the cushions and on the steering wheel, and on the windshield, on the side of his car—to say nothing of all over himself—then he drives around the block and finds the car squeaks and groans and rattles just about as badly as it did when he started.

He gives it up as a bad job. Then he does one of two things. If there is a livewire oil dealer or oil jobber who has told him about his greasing service, he hikes over right now. If not, he lets it go.

You can be sure he will come and see you if you have let him know about it. He doesn't have a chance to forget the fact that his chassis needs greasing. Every squeal, shrieks at him, telling him to have his chassis greased.

*Nourse Oil Co., Kansas City.

I have never kept actual count, but I wouldn't put an estimate of the "squeaks" at one thousand to the minute. There is nothing that anyone has to sell that gets a constant flow of argument like that—and one that can't be ignored.

How to Get the Business

I trust my views on how to get the business of chassis greasing will not sound too much like an advertisement of the Nourse Oil Co.

I do not wish to expound my theories—I wish to tell only of the actual experience of the Nourse Oil Co. as well as its dealers and jobbers. Consequently, I can only use our experience as my guide.

The first thing that we found necessary was a proper grease.

Too little attention had hitherto been given to the right kind of grease for chassis lubrication, as well as the right kind of oil for the springs. When you stop to think of it, chassis grease gets the worst of the bargain. The greases in the transmission and axle are enclosed.

Thousands of dollars have been spent to keep any trace of water, dust or grime out of them. The same is true of the oil in the cylinders. True, some particles of dust get into the oil and greases in spite of everything—but not any great quantity.

He doesn't have to perform this service unless he's caught out on the road a long way from a garage without a spare

How about the parts of the chassis that must be greased and oiled? They are right out in the wet and weather. Dust, sand, mud, water, everything imaginable splashes right on them. Talk about quality being necessary in the inside lubricants—think what the outside lubricants have to put up with!

That's one thing which makes the motorist disgusted with the average cup grease. The minute water touches it, it saponifies. It cakes in the cup—draws away from the parts to be lubricated—and does no lubricating at all.

A motorist might grease his car thoroughly one day—or have it greased at a garage—the next day it would be squeaking and groaning as bad as ever. He gave it up as a bad job.

We knew that it would never work to try to serve customers with that kind of grease. They would soon be disgusted — permanent customers were what we wanted.

To meet the problems, we developed "Noursite," a grease that will not mix with water.

We developed a grease that would not saponify. We developed one that would not become hard in the cups.

As a result, as long as

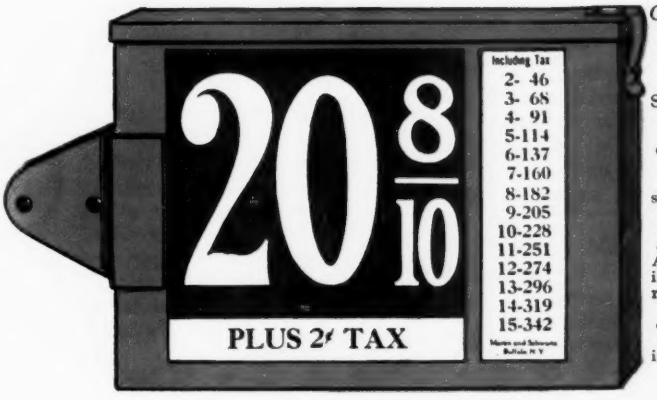
NEW

MARTIN & SCHWARTZ

Gas Selling Equipment

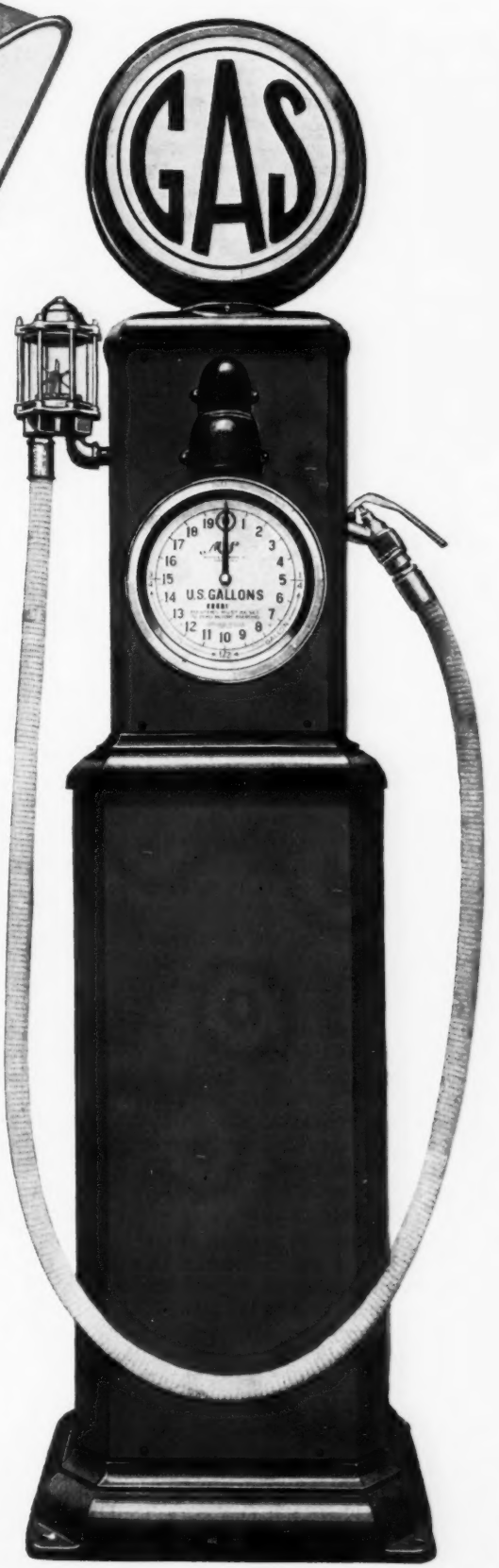
LIGHT DISPENSING PRICING

You'll want Literature



M & S Continuous Flow METER PUMP

Single or double Big Dial with single discharge for island use. Accurate, speedy, nozzle control. Electric and air operated. An outstanding gas seller, recognized by many large companies as the ultimate in gas dispensing equipment. Bulletin on request.



M & S FLOOD LIGHTS, Cast Aluminum Alloy

This equipment is free from glare and is not to be confused with the ordinary flood lights on the market. Complete descriptive Bulletin on request.

M & S PRICE REGISTER—A Real Time Saver

Comes equipped ready to attach to pump. Has prices for all state requirements. Weatherproof and very moderately priced. State "tax price" [if any] at which gas is sold when requesting complete Bulletin.

M & S ONE GALLON PUMPS—Gas and Kerosene

Two real jobs which help to sell small users in bulk. The Bulletin contains complete information. *As manufacturers and jobbers of complete oil equipment we are in position to offer the trade useful suggestions to help solve dispensing equipment problems.*

MARTIN & SCHWARTZ, Inc. Factory and Office:
2651-53 Main Street — BUFFALO, N. Y.

Branches. Philadelphia, Pa., 2401 Chestnut Street—Syracuse, N. Y., 214 W. Genesee Street
Detroit, Mich., 405 Stormfeltz, Loveley Building—Pittsburgh, Pa., 6426 Hamilton Avenue

there is a reasonable quantity of grease in the fittings, the car receives perfect lubrication. The motorist doesn't drive in one day to have his car greased, and then have it squeaking and groaning the next. He is satisfied with the job and he is only too glad to come back for more.

A Pressure Gun

The second step was to develop a tool, a machine, instrument, or whatever you might call it to apply the grease satisfactorily. The hand tools were not sufficient, before many cars were greased it would be empty. Then came the job of refilling it.

Many old, rusted spring shackles will not be opened by a small hand gun. It would be impossible for an oil man to grease more than a half dozen cars a day, along with his ordinary work, with a small hand gun, so it was necessary to develop something different.

He's fast getting to the point he won't perform this service himself even if his car suffers

For this purpose, we developed our Nourse Instant Greaser, which is supplied with Alemite, Zerk and Dot fittings.

A booster delivers 12,500 pounds of pressure behind the grease. This does not overtax the hose—in fact, the hose has only the usual air pressure to force the grease to the gun. The booster, however, delivers power to force the grease clear into the fittings where it belongs.

This gun holds 50 pounds of grease. That is sufficient to grease about 150 cars. A long hose and patent nozzle arrangement makes any part of the car easily accessible. With this greaser, an ordinary car can be thoroughly greased in five to ten minutes, even by an inexperienced operator.

Thus equipped, we knew that we had a grease that would satisfy the public as well as a means of applying it that would satisfy the oil man. We did not feel, however, that it was fair to our dealers and jobbers to leave it to them as to how to get business. It was our hope to assist them in every way possible.

Obviously, each dealer could not visit every motorist personally. We had a story to tell the motorist. We knew it would cost him less money to grease his chassis than not to grease it. We knew it would cost him less time and worry. But, how to tell him was the next question.

National advertising is out of the question for us. We did not care to invest even in sectional advertising, as we did not care to invest money in advertising that would benefit dealers who were not using our product. So, direct mail advertising, going direct to the customers using Nourse products seemed to us to be the answer. An advertising novelty postcard was furnished free to each dealer or jobber who placed an order for a certain amount of Noursite. He could mail them to customers in his territory inviting them to come in and have their chassis greased. A premium was given each one who called, so as to insure as many coming in as possible.

Then, the dealer could demonstrate by greasing the chassis to advantage —he could tell the customer—and he could get a regular customer.

To this, many other plans have been added. One firm groups all small services in one. There are a good many things a motorist neglects—mostly because he hasn't the time. These are:—

Greasing the chassis, oiling the springs, tightening the bolts, putting water in the battery, greasing the differential, and greasing the transmission.

Each one of these is essential. Each one is neglected. Some of our customers maintain a regular service of all of these items for their patrons. No charge is made for putting in water or for the labor of putting in oils and greases. Thus customers come in regularly once a month, to have oil changed, chassis greased, bolts, tightened, et cetera.

Prices charged by dealers vary. The minimum for greasing is usually $1. A complete service of greasing, tightening bolts, watering batteries, etc., is figured at $1.50. No charge is made for grease on a simple chassis lubrication. If, however, a differential and transmission grease is used, this is charged at the regular retail price per pound.

Customers living in cities, even small cities, find it practical to drive their customers to work and deliver their cars. The time that it takes the motorist is the chief objection. Experiments have demonstrated to us that the time involved really means more to the motorist than the money.

Many of our customers invite motorists to stop at their oil stations on their way to work—then drive them to work, and bring the car back to be oiled and greased. Then the car is delivered back to the owner at any time or place he suggests.

It might seem at first that this would require a lot of time, and for that reason prove unprofitable.

On the other hand, it actually saves time. It requires but a few minutes to drive the owner to his place of business and back. Then the car can be put in a convenient place and greased at the convenience of the operator. He will then perform this service at a time when he would otherwise be idle.

The time used in driving back and forth is made than offset by the fact that he is using what would otherwise be idle time.

Profit?

You have said it. Profits in greasing chassis are bigger than in any other department of the oil business. Profits on gasoline are seldom very much. Profits on oil range from 33 1/3 per cent to 50 per cent.

Profits on chassis greasing are at least 800 per cent or more. Figure the average grease job at $1. That will take ¼-pound of grease, costing 12 cents a pound. Labor required is about 10 minutes. Figuring the cost of material and labor at 20 cents, and the price at a dollar you have a profit of 800 per cent.

Few oil dealers and jobbers service less than 20 to 30 different cars a day.

It can be readily seen that if only a small portion of these—say, five to ten, each day—take advantage of your chassis greasing service—the profits are not only well worth while, they are tremendous.

Last but not least, this business can be secured without the addition of a single dollar's worth of overhead. No extra help is necessary.

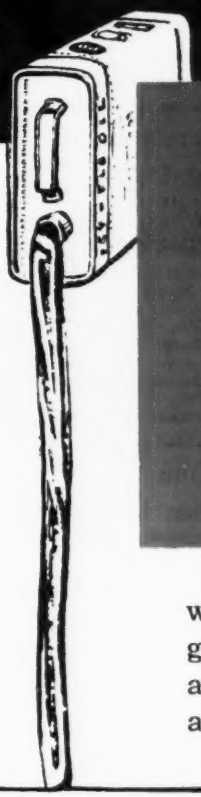
The cost of rent, lights, help and everything else entering into the operation of a garage filling station and other business handling oils and greases, is exactly the same. The

DEALERS JOBBERS MARKETERS

NEW WINTER OIL

ICY-FLO Oil is a secret blend of oils with a Pennsylvania Base, remaining fluid even at 30 deg. below zero. ICY-FLO lubricates instantly and thoroughly and safely any type of gasoline motor at any time.

December, January, February, will be live months for those who sell ICY-FLO.



There are distribution rights available on this ***wonderful new oil. Ask about them.***

Announcing a **NEW WINTER OIL** that will enable every station to do an extra-thriving trade when frost is in the air!

ICY-FLO is here . . . . to put an end to winter stagnation in the filling station business—to help marketers and distributors establish new peak sales in mid-winter. ICY-FLO is a proved winter oil that does away with cold weather troubles—frozen crankcases and transmissions—hand cranking—towing and other cold weather annoyances. ICY-FLO stays liquid and flows freely at 10 degrees, 20 degrees, 30 degrees below zero, giving safe dependable lubrication service at all temperatures.

ICY-FLO Fact No.1

By actual friction tests Icy-Flo Oil shows greater "oiliness" or "greasiness" than any other oil of equal viscosity.

If you're selling ICY-FLO this winter, motorists will flock to ***your*** station to demand this wonder oil. This extra patronage will naturally result in far greater gasoline gallonage and larger grease and anti-freeze sales over and above a splendid and profitable volume in ICY-FLO Oil itself.

Decide NOW to go after this bigger winter business with the aid of ICY-FLO. Mail the coupon now.

ICY-FLO OIL

The oil that flows at 30° below zero

Newspaper advertising, signs, folders and other advertising supplied free.

THE ARROW OIL CO.,
Wooster, Ohio

☐ Advise if territory here is available.

☐ Advise how I can get a trial drum.

Name _____

Street _____

City _____ *State* _____

A

INDEX TO ARTICLES

Selected Bibliography on Petroleum Technology

Editor's Note—The brief abstracts of current literature printed below are so arranged that they may be cut apart and mounted on 3" x 5" library indexing cards. The indexing numbers assigned bring the cards into logical sequence in the files. The "Decimal Index of Petroleum Technology" gives the key to the articles. This book is published exclusively by NATIONAL PETROLEUM NEWS as a service to its readers. Price $1.00. Abstracts started April 4, 1928.

SOMETHING NEW!

Have you ever racked your brain for hours—perhaps days—to recall where you saw some particular article on "shell stills" or perhaps "diamond drilling" or a certain "merchandising plan"?

Henceforth, your mind can rest easy on that score!

The "Decimal Index of Petroleum Technology" just out—tells you how you can refer to important articles on production, refining, natural gasoline manufacturing and marketing in a moment.

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Important articles on all phases of petroleum developments will be summarized regularly in NATIONAL PETROLEUM NEWS as indicated on this page. This will include articles published by NATIONAL PETROLEUM NEWS; American Petroleum Institute; U. S. Bureau of Mines; U. S. Geological Survey; A. I. M. E., American Assn. of Petroleum Geologists, and other associations who publish important developments relating to oil.

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Paul Truesdell — **730.720**

"New Refinery Adapted to Small Field and Needs of Local Market"

National Petroleum News, June 20, 1928, pp. 23-26.

A refinery built by Standard of Indiana at Zilwaukee, Mich., near Saginaw, is described. Plant consists of two horizontal, internal flued stills with bubble towers and absorption plant. It is located near the Saginaw field and draws crude from there as well as getting it by tank car crude from the Muskegon field across the state about 140 miles away. Plant built so it can be indefinitely expanded or could be moved away with high percentage of salvage. Powered with two small boilers bought from Henry Ford, who took them out of a dismantled shipping board ship.

D. F. Gerstenberger — **766.**

"Loading Products in Boat or Tank Car Offers Chances to Cut Costs"

National Petroleum News, June 20 issue, pp. 75-79.

Description is given of methods actually used in loading barges and tank cars at a big refinery, as well as shipping in barrels and other packages. He points out that in loading a tanker or barge it is important that the order in which the vessel's tanks are to be loaded should be thoroughly understood between the captain and the man in charge of the pumping. If this understanding prevails, the loading may proceed continuously. For tank car loading, a pumphouse and pump equipment solely for this purpose should be provided. It should be handy both to the loading racks and the tanks. Loading tanks should be large enough to permit loading of a trainload without interruption. Loading connections should be provided with quick opening and closing valves. Cars should be sampled from the foot valve as well as from the top.

L. D. Mann — **740.**

"Reduction of Losses in Refining Offers Big Field for Increasing Profits"

National Petroleum News, June 20, pp. 92-98.

The author, to show the possibilities for saving in cutting down of refining losses, gives a table showing a loss on crude stills of 3.9 per cent, loss on the cracking stills of 9.7 per cent and an average loss on all operations of 6.9 per cent. He states that this is typical of a 7000-barrel refinery cracking and making lubes.

Refinery losses are of two kinds, visible and invisible. Former consists of such items as can be readily determined and usually cause much concern. They are, however, the smaller of the two. The invisible losses, due to evaporation, account for approximately two-thirds of the total losses in storage and treating. Some remedies suggested: Tight batch agitator with recirculating pump for treating. Lookboxes, rundown tanks and so forth should be so designed as to be vapor tight and liquids should enter tanks below the surface of the liquid. cooling water in condensers should be colder. equipment of storage tanks with breather valves set for safe pressure and vacuum.

G. G. Oberfell, R. C. Alden and H. Hepp — **214.21**

"A Laboratory Method of Determining Vapor Pressure of Gasoline"

National Petroleum News, May 16, 1928, pp. 57-64.

The static method of determining the vapor pressure of natural gasoline has been used most widely, but investigation has shown that different vapor pressure readings can be obtained for the same liquid if different vapor-liquid volume ratios are used. A laboratory apparatus minimizing some of the errors and disadvantages of static methods such as Beistle-Prather is described. The apparatus consists of a three-bulbed burette enclosed in a water bath, a mercury manometer, a leveling bulb and a sampling device. With this apparatus the spring gauge error is eliminated. Since no vapor is vented during the test the apparatus has the advantage of permitting the checking of readings as many times as desired. Results of tests are given showing uniformity of readings by different operations.

L. S. Gregory — **778.2**

"Theory and Practice of Fractionation in Natural Gasoline Plants"

National Petroleum News, May 23, 1928, pp. 102-106.

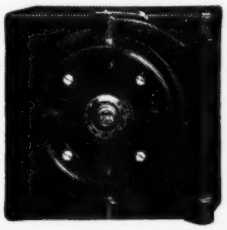
This paper, presented before the annual meeting of the Natural Gasoline Association of America, describes most of the commercially applied methods of stabilizing or fractionating natural gasoline but asserts that the high pressure methods are most satisfactory. For operation of rectifying plants the author presents a table giving operating temperatures and pressures and volumes necessary to produce Butane Free and Grade Double A gasolines. For smooth plant operation column feed should be of uniform specification supplied in constant volume with accurately controlled temperatures and kettle levels.

Another Filling Station Raided!

A SHORT "joy ride" from a nearby city—a quick attack upon your filling station, and the thieves return to their haunts well supplied with cash.

Only the best protection obtainable—the York Round Door Chest—is good enough to resist the stubborn attacks of these cracksmen.

Follow the lead of the largest chains of filling stations—install York Round Door Chests.



York Safes

York Safe and Lock Company
York, Pa.

Speeds up truck washing!

DON'T waste time and labor washing trucks by slow-cleaning, inefficient methods. Use Oakite Composition No. 1 and speed up these jobs!

This effective cleaning material makes easy work of removing oil and dirt from tanks—cuts muck and grease from chassis quickly and thoroughly. Whether you use a spray outfit, steam cleaning equipment, or wash by hand, you will find Oakite Composition No. 1 a big help and a real money-saver on every job.

"Oakite in Garages" gives the facts. Copy on request.

Oakite Service Men, cleaning specialists, are located in leading industrial centers of U. S. and Canada.

Manufactured only by
OAKITE PRODUCTS, INC.
42C Thames St., New York, N. Y.

OAKITE
Industrial Cleaning Materials and Methods

extra revenue taken in thru the greasing of chassis is all clear profit, with the exception of the slight cost of labor and grease.

It is only a question of time until every oil dealer will have a chassis lubrication department and will push it vigorously. Those first to see the opportunities for profit and to take advantage of it, are naturally those who will reap the biggest share of the harvest.

Ethyl Gasoline Now Sold in New York

NEW YORK, Aug. 17.—Ethyl gasoline, sale of which has been prohibited in New York, will be offered to the motoring public there starting this week.

Lifting of the ban placed on this treated motor fuel by the New York City health department in 1924 recently was announced.

Three large oil companies operating in New York City already held manufacturer's licenses issued by the Ethyl Gasoline Corp. when the ban was lifted. Two of them, the Beacon Oil Co. and the Tide Water Oil Co., have large retail distribution in New York City, while the third, the Walburn Petroleum Co., does a jobbing business only.

This market already offers a number of premium anti-knock motor fuels, such as "Socony Special," Sinclair "H-C," Pure Oil "Detonox," Utility Oil Co. "Super-X," and Warner-Quinlan "Mileage-Plus," but these are all straight gasolines.

In its resolution revoking the ban on Ethyl, the health department set forth the following restrictions and regulations:

"Whereas careful investigation by a group of eminent, disinterested scientists, as well as reports from the state commissioner of health of New York and the surgeon general of the United States public health service, have failed to disclose any scientific evidence whatsoever indicating that the use of Ethyl gasoline as a motor fuel sold under such restrictions as are generally imposed has produced any effects deleterious to life or health,

"Be it resolved, that gasoline containing tetraethyl lead or other like substances may be sold, handled and distributed in the City of New York upon the following restrictions and regulations and not otherwise:

"1. That gasoline containing tetraethyl lead or other substances be colored or dyed so as to readily distinguish it from other gasoline.

"2. That such gasoline shall be permitted to be sold for motor fuel only.

"3. That such gasoline shall not be permitted to be used for cleaning, washing or other purposes than above set forth.

"4. That every precaution be taken

Original "GREASE-PAK" ~with OVAL Top

TRADE MARK REG. U.S. PAT. OFF.

A One-Hand Outfit that CARRIES CLEAR!

GREASE-PAK, Model 25, is the finest, most convenient one-hand greasing outfit obtainable. The fill opening cover is hinged to the 16-gauge top of the heavy steel container, making one-piece construction. All openings are flanged upward, assuring waterproofness. Pump is Bennett standard ½ lb. stroke, valve-in-bottom grease pump. The outfit is mounted on a very strong malleable iron base having 4 feet. 4½' of ¼" flexible metal hose and cast nozzle are furnished. Metal sleeves protect hose connections against breakage.

"GREASE-PAK" Filler Model 652

Special Bennett unit designed for transferring grease from barrel to Grease-Pak with perfect cleanliness and convenience. Pumps 2 lb. grease per stroke. Fits 1½" and 2" drum openings.

Write for Bulletins

to Muskegon. Bennett Export Corporation, 32 Broadway, New York City.

Bennett Pumps Corporation
QUALITY BUILT
Bennett
Dispensing Equipment
FOR OIL MARKETERS
Muskegon, Michigan.
"Symbol of Quality"

The NILES "Ringseal" Container is offered in sizes holding from 25 lbs. to 100 lbs. Any special sizes can be made to your requirements.

Patent Pending

A Perfectly Sealed Steel Container That Has BEAUTY As Well!

IT is most logical to emphasize the sturdy resistance to shipping hazards which the NILES "Ringseal" Steel Container offers. And you must be acquainted with the details of the perfect *seal*—effected by means of a single stroke—offering the safest protection for Greases, Oils, Paints, Graphites and all types of products. But in addition to all these, the "Ringseal" Container has GOOD LOOKS, which are a decided sales factor these days. Any label design, trade mark or special color scheme can be worked out. Let us send you a sample pail and complete details.

THE NILES STEEL PRODUCTS CO.
Niles, Ohio

NILES
RINGSEAL

No Large Cash Balance To Invite Theft
ALLISON COUPON BOOKS
Accurate—Compact—Convenient

The temptation to the hold-up man is gone when he knows your filling stations use Allison Coupon Books. They give you faster, safer service. Furnished in stock or special designs. *Send for samples and prices.*

Allison Coupon Company
Indianapolis, Indiana
Coupon Book Specialists Since 1888

in the handling, selling and distribution of such gasoline so as to prevent the spilling thereof or having it come in contact with the skin or clothing of persons engaged in the handling, sale or distribution of same.

"5. That signs be conspicuously posted in filling stations, fuel supply depots or other places where the product is sold; handled or distributed so that the purchaser may be properly warned and that it may be used for fuel purposes only.

"6. That printed circulars or notices in a form to be approved by the Department of Health be provided by all persons handling, selling or distributing such gasoline and given to the purchaser thereof, warning the said purchaser that such gasoline may only be used for motor fuel and for no other purpose."

Commenting on the action taken by the New York City Health Department, E. W. Webb, president of the Ethyl Corp. said, "Zurich, Switzerland, now is the only city or district in the world where the sale of a blend with tetraethyl lead is prohibited. Alarming propaganda in the London Daily Mail, which has the largest circulation of any newspaper in the world, early in 1924 reached the eyes of the Lord Mayor of Zurich, whereupon he issued a resolution reading in part as follows: 'Whereas the streets of Zurich have been contaminated with lead from Ethyl gasoline, etc. etc.' Subsequently a ban was placed on the sale of Ethyl gasoline in Zurich."

Oil Trademarks for Copyright

The following are trademark applications pertinent to our field pending in the United States Patent office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Building, Washington, D. C., trade-mark specialists.

As an additional service feature to its readers, this journal gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering. You may communicate with the Editor of this Department, or send your inquiry direct to the National Trade-Mark Company, stating that you are a reader of this journal.

"FLASH" No. 263,019. Kay-Tee Products Co., Cleveland, O. For fluids for filling cigar and cigarette lighters.

"WHITE PEPPER" No. 266,184. Ashland Refining Co., Ashland, Ky. For gasoline.

"MORVIS" No. 266,908. Bar-Stone Oil Co., Chippewa Falls, Wis. For gasoline and other fuel oils and lubricating oils and greases.

"GREEN PEPPER" No. 268,132. Ashland Refining Co., Ashland, Ky. For gasoline.

"WESTERN OIL & REFINING CO. W" No. 260,301. Western Oil & Refining Co., Los Angeles, Cal. For petroleum products.

"GUN-FIL" No. 261,959. Gun-Fil Corporation, Philadelphia, Pa. For lubricating oils and greases.

"ALPPRO" No. 264,627. W. R. Woelk, Alpena, Mich. For lubricating oils.

"BEACON PENN" No. 265,087. Beacon Oil Co., Inc., Everett, Mass. For motor lubricating oil.

"KOOLMOTOR" No. 265,952. Cities Service Oil Co., Cleveland, Ohio. For gasoline.

"RED PEPPER AVIATION" No. 266,183. Ashland Refining Co., Ashland, Ky. For gasoline.

How Important Petroleum Tests Are Applied and What They Show

THIS is the sixth installment of the treatise on "Significance of Tests, prepared by a sub-committee of Committee D-2 on petroleum products of the American Society for Testing Materials. The work is being published serially in NATIONAL PETROLEUM NEWS *by special permission.*

The purpose of the treatise is to tell in simple language the object of each of the recognized tests used by buyers and sellers of petroleum products, and their relation to quality of products. The first installment was published on page 60 *of the July* 11 *issue of* NATIONAL PETROLEUM NEWS, *the second on page* 26 *of the July* 18 *issue, the third on page* 29 *of the July* 25 *issue, the fourth on page* 80 *of the Aug.* 1 *issue and the fifth on page* 73 *of the Aug.* 15 *issue.*

PRECIPITATION TESTS

CRUDE petroleum contains constituents which for want of a more definite description are classed as "asphalt." These constituents are non-volatile and by distillation are concentrated in the residual products. If the latter are to be used as lubricants, it is frequently necessary to test for the content of asphaltic material.

The chemical composition of this material is not known, but it is sparingly soluble in naphtha composed of low-boiling paraffin hydrocarbons, and this characteristic is the basis of the various so-called precipitation tests.

Scope of Methods: The A.S.T.M. tentative method of test for precipitation number of lubricating oils (D 91—21 T)[1] involves diluting the oil to be tested with petroleum naphtha of specified properties, and separating the precipitate by centrifuging. The volume of the separated layer is reported as the A.S.T.M. precipitation number of the oil.

This test is not entirely satisfactory as the present specification for the diluting naphtha does not insure the necessary degree of uniformity of solvent power, but a new specification is in process of development by the committee. Another disadvantage is that the compactness of the precipitate is not the same for all types of oil, from which it follows that no definite relation exists between A.S.T.M. precipitation numbers and percentages of "asphalt" as determined by gravimetric methods. The advantages of the method are that it is simple and convenient, and avoids laboratory operations which call for chemical training on the part of the operator.

The so-called Holde "hard asphalt" method[1] involves dissolving a weighed quantity of oil in a specified grade of naphtha (so-called normal benzine), allowing the mixture to stand 24 hours, filtering off the precipitated material and weighing the latter. This method is largely used in Europe, and to a certain extent in this country. It is reasonably satisfactory as regards reproducibility of results and is not subject to the objections which apply to volumetric methods, but is time-consuming and involves skillful operating technique. It has the additional disadvantage of involving the use of a "certified" diluting naphtha obtainable from only one source of supply and which is not adequately distributed.

1 *Proceedings*, Am. Soc. Testing Mats., Vol. 21, p. 648 (1921); also 1927 Book of A. S. T. M. Tentative Standards, p. 427.

There are other methods for determining "asphalt" in oil, but the general principles involved are similar to those of one or other of the two methods described above. The variations in details of procedure, however, are reflected in the results obtained, and it is necessary to specify the method whenever the "asphalt" content of an oil is reported.

Significance of Results: The effect of "asphalt" content upon the lubricating qualities of an oil is not definitely known. For certain types of service there is no question as to the unsuitability of oils which contain appreciable quantities of asphaltic constituents, but on the other hand the importance of moderate variations undoubtedly is exaggerated by many users. The chief value of precipitation tests is in classifying the several groups of residual lubricating oils. Filtered products, such as the so-called "bright stocks" largely used as constituents of motor oils, contain negligible quantities of asphalt. Another group, which includes steam-refined cylinder stocks, is characterized by a moderate percentage of material that is insoluble in "light" naphtha. So-called black oils, which are used for such purposes as the lubrication of gears and car journals, usually show precipitation tests that are moderately high.

EMULSIFICATION

WHEN oil and water are mixed in any manner they generally tend to separate more or less rapidly on standing. The presence of small amounts of certain other materials decreases the rate of separation and may prevent any separation whatever. This physical condition is known as an emulsion, and the phenomenon is known as emulsification.

For certain purposes, as, for example, in the lubrication of marine engines and in the lubrication and cooling of certain types of metal-cutting tools, it is desirable that the oil form a relatively stable emulsion with water. For other purposes, particularly in the lubrication of steam turbines, it is highly essential that any emulsion which may be formed separate rapidly and completely. Accordingly a knowledge of the rapidity with which the constituents of an emulsion of oil and water will separate is of considerable value. Since it is not possible to duplicate service conditions in the laboratory, it is necessary to measure the rapidity of separation under some arbitrarily selected set of conditions. This is expressed in some numerical form which serves as an index of the emulsifying characteristics of the oil.

Scope of Methods: The A.S.T.M. standard method of test for steam emulsion of lubricating oils (D 157—27)[1] is designed for use on oils whenever a knowledge of the tendency to separate from water is required. It is particularly applicable to turbine oils. Steam is passed into the oil under specified conditions and the time in seconds required for complete separation of the oil and condensed steam is recorded as the steam emulsion number (S.E. number) of the oil.

Another procedure is Method 320.31 for demulsibility at 130 degrees F. given on page 85 of U. S. Bureau of Mines *Technical Paper No. 323B.* Oil is paddled with water under specified conditions and the maximum rate of separation of the oil, in cubic centimeters per hour, is recorded as the demulsibility. Method 320.41 is a modification of the procedure with respect to temperature of test. Methods 320.11 and 320.21 for emulsion test at 130 degrees F. and 180 degrees F., respectively, make use of the same apparatus, but use sodium hydroxide solution and salt solution in addition to water, and the separation is recorded as being complete or incomplete after 30 minutes standing.

Significance of Results: For forced-feed circulating lubrication systems where the oil is

1 1927 Book of A. S. T. M. Standards, Part II, p. 414.

likely to come in contact with water or steam, the steam emulsion test is of great importance. This is particularly true of steam-turbine lubricating systems. For oils intended for this type of service the use of a test of this kind is thoroughly established. Next to viscosity it is considered the most important test for steam turbine oils, since rapid separation from water is an essential characteristic.

For certain types of marine engine lubrication the opposite is the case. Here it is desired to secure an oil which will separate from water very slowly and the persistence of the emulsion is a matter of prime importance. This is also true of oils used for lubricating and cooling certain types of cutting tools.

For oils intended for other purposes the use of the test is of debatable value. While the test is sometimes included in specifications for such oils, there is no uniformity of opinion as to its practical value, and, in general, it may be considered unnecessary.

OXIDATION AT HIGH TEMPERATURES

WHEN petroleum oils deteriorate in service, this deterioration is generally accompanied by oxidation products. In some types of service the possibility of oxidation is not considerable, but in others, for example the lubrication of steam turbines and the insulation and cooling of transformers, the ability of the oil to resist chemical change is of prime importance. Accordingly a method of test that will measure this characteristic is desirable.

For different classes of service, different types of tests have been proposed, all of the accelerated type. Some of the methods have been developed to such a degree that the results obtainable are moderately reproducible, while others have not even reached the stage of yielding concordant results in the hands of a single operator. None of these methods, whether good or poor from the point of view of laboratory technique, has been correlated with service behavior to such degree as to make possible any agreement as to which tests should be standardized for universal use.

DIELECTRIC STRENGTH

WHEN a material that may be classed as a non-conductor of electricity is subjected to an electric potential, only a negligible current flows until the electrical stresses have reached an intensity at which there is a sudden and large increase in current and an electrical and mechanical breakdown occurs. The value up to which the electrical stress must be brought in order to cause the electrical breakdown is called the dielectric strength of the material. This is expressed as voltage per unit length and is stated in kilovolts per millimeter or in equivalent units. In test methods where a single definite breakdown distance has been standardized upon, the term "dielectric strength" often is applied simply to the voltage at which breakdown occurs.

Scope of Methods: The A.S.T.M. standard methods of testing electrical insulating oils (D 117—27)[1] include a procedure for the determination of the dielectric strength of oils used in transformers, oil circuit breakers, and other electrical apparatus as an insulating or cooling medium, or both. The test involves subjecting the oil to a gradually increasing electrical stress in a test cup fitted with fixed-gap electrodes consisting of circular disks of polished brass or copper.

The A.S.T.M. tentative methods of testing cable splicing and pothead compounds (D 176—25 T)[2] include a procedure for the determination of the dielectric strength of semi-solid and solid compounds used in cable splices and potheads. The test involves melting the sample, pouring it into the test container, and applying the electrical stresses at several different temperatures.

Significance of Results: Dielectric strength, when reported simply as the number of kilovolts, is without significance, unless the shape and size of the electrodes, spacing, frequency and wave form of voltage, and rate of voltage application, are specified or understood. Temperature and other physical conditions also affect the experimental values. Fixed-gap methods, such as those mentioned above, are particularly suited to the testing of insulating liquids and insulating materials that can be readily melted, as their use renders unnecessary separate measurement and report of the gap length in each test, variations in stress due to changes in shape of electrodes, and other factors.

The "dielectric strength," as determined by these methods, may be taken as a measure of the adequacy of insulating materials for the electrical stresses they are intended to resist. This test may be used in measuring the effect of contamination in new or used materials, by such substances as water, dirt and conducting particles. It is also used by operators of electrical equipment as an indication of aging in service.

CARBON RESIDUE

PETROLEUM products are mixtures of many compounds which differ widely in their physical and chemical properties. Some oils may be vaporized at atmospheric pressure and in the absence of air without leaving an appreciable residue, while other oils, upon distillation, leave a non-volatile carbonaceous residue. This residue when determined in accordance with prescribed procedure is designated "carbon residue."

Scope of Method: The A.S.T.M. tentative method of test for carbon residue of petroleum products (D 189—27 T)[1] involves destructive distillation of a weighed quantity of oil in apparatus so designed as to exclude air, to permit proper control of rate of heating, and to eliminate possible condensation of distillates in or on the oil contained. This method is a modification of the procedure devised by P. H. Conradson and described by him in 1912.

Significance of Results: The carbon residue test was originally developed for comparison of the carbon-forming properties of lubricating oils for internal combustion engines. It is frequently claimed that the quantity of carbon deposited in cylinders and on pistons is proportional to the carbon residue of the oil. Under ideal conditions this is probably true, but with average operating conditions, other factors, such as the viscosity of the oil, the mechanical condition of the engine and the conditions of carburation of the fuel, may dominate in controlling carbon deposition.

It has been found that the carbon residue content of the oil bears a fairly direct relation to the quantity of carbonaceous residues deposited in the carbureting apparatus. Consequently the carbon residue test has been used for determining the carbon-forming tendency of such petroleum products as gas oil and fuel oil.

In the operation of certain types of oil burning equipment and heavy oil internal combustion engines, the conditions of vaporization and combustion make possible the deposition of a carbonaceous residue, and in such cases, the carbon residue of the oil fuel may be important.

ACIDITY IN GASOLINE

THE so-called acidity test, as applied to gasoline, is actually a qualitative test for the presence or absence of free acid or organic compounds of a mineral acid which are decomposed at moderately high temperatures. The only acid which could normally be present in gasoline is sulfuric acid, which is one of the chemicals used in the refining process.

The society has not standardized this test, but Method 510.2, published in Bureau of Mines *Technical Paper No. 323B*, page 89, describes a procedure which involves extracting the distillation residue with distilled water and testing the extract for acidity with methyl orange indicator.

This test is essentially a refiners' test and a positive indication rarely occurs with products which have been released to the consumer. The pres-

1 1927 Book of A. S. T. M. Standards, Part II, p. 796.
2 *Proceedings*, Am. Soc. Testing Mats., Vol. 25, Part I, p. 810 (1925); also 1927 Book of A. S. T. M. Standards, p. 615.

1 *Proceedings*, Am. Soc. Testing Mats., Vol. 27, Part I, p. 915 (1927); also 1927 Book of A. S. T. M. Tentative Standards, p. 386.

ence of free acid is obviously an indication of improper refining.

NEUTRALIZATION NUMBER

PRACTICALLY all petroleum lubricating oils contain substances, of varied and indeterminate chemical composition, which have acid characteristics. The proportion of these substances present in an oil is commonly referred to as its "organic acidity." These acid compounds are, mainly, natural constituents of crude petroleum and their presence in finished lubricating oil is not necessarily an indication of improper refining or poor quality.

A large proportion of the petroleum lubricating oils now produced undergo treatment with mineral acid and caustic alkali in the course of refining. If the refining operations are not properly conducted, small quantities of one or the other of these chemicals may remain in the finished oil and, of course, are undesirable and unnecessary impurities.

The "Neutralization Number" of an oil is defined as the weight in milligrams of potassium hydroxide required to neutralize one gram of oil. It represents the sum of the quantities of mineral and so-called organic acids present in the oil or the difference between the organic acidity and the alkali present in the oil. If, as is usually the case, no mineral acid or alkali is present in the oil, the neutralization number is directly proportional to "organic acidity."

The "Alkali Neutralization Number" is defined as the weight in milligrams of potassium hydroxide equivalent to the acid required to neutralize one gram of oil.

The "Mineral Acid Neutralization Number" is defined as the milligrams of potassium hydroxide required to neutralize the mineral acid content in one gram of oil.

In writing specifications for lubricating oils it is more or less common practice to require that the "organic acidity calculated as percentage of oleic acid" or the "organic acidity calculated as SO_3" shall not exceed some selected limit. This involves making unnecessary and useless calculations after obtaining the actual experimental results of the neutralization tests and is also objectionable because there is an implication that the oil in question may contain constituents which are not likely to be present.

Scope of Method: The A.S.T.M. tentative method of test for neutralization number of petroleum products and lubricants (D 188—27 T)[1] involves determination of neutralization number by titrating with standard alkali the hot alcohol extract of a weighed quantity of oil. The alkali neutrali-

1 *Proceedings*, Am. Soc. Testing Mats., Vol. 27, Part I, p. 927, (1927); also 1927 Book of A. S. T. M. Tentative Standards, p. 418.

Fitting the Fire Extinguisher to the Fire

IF you are in the oil business, you know that there are "fires and fires". You also know that an extinguisher effective on one fire may be useless on another.

On your property there may be several hazards, each requiring a different type of fire extinguisher.

A COMPLETE LINE

The Pyrene Manufacturing Co. makes fire extinguishers for every conceivable fire hazard.

Our Engineers have developed the most modern types of fire fighting equipment for the protection of many hazards in the oil industry.

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Pyrene Fire Extinguishers in 1 pint—1 quart—1½ quart and 2 gallon sizes.

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It is being used to recover spent lubricating oils from the Diesels.

The details of this unit will interest you. Send for our illustrated folder.

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WE couldn't tell Ford how to build automobiles nor could we begin to give Edison pointers on electricity. Our aim isn't to invent a self-discharging mouse trap or to give Lindbergh instructions on how to fly an aeroplane.

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zation number or the mineral acid neutralization number is determined by extracting a weighed quantity of oil with hot distilled water, testing with an indicator to ascertain whether this extract is acid or alkaline and titrating with an appropriate standard solution. If, as is usually the case, the extract is neutral, no titration is necessary and the alkali and mineral acid neutralization numbers are zero.

All other tests for neutralization number are based on the same general principle as the A.S.T.M. method. The differences concern details of operation or the terms in which test results are reported.

Significance of Results: It is obvious that the effect of alkali or mineral acid in a petroleum oil is deleterious, and it is usual to specify that the alkali or mineral acid neutralization number shall be either zero or some extremely low figure. The practical significance of "organic acidity" is complicated by many considerations. The essential facts are as follows:

1. Oils derived from certain crude oils commonly show low neutralization numbers while oils from other crude oils show relatively high neutralization numbers, unless subjected to special processes.

2. The organic acids normally present in lubricating oil are not corrosive and have no directly harmful effects.

3. It is contended by some, although the supporting evidence is not absolutely definite, that the presence of organic acids improves the friction-reducing qualities of oil.

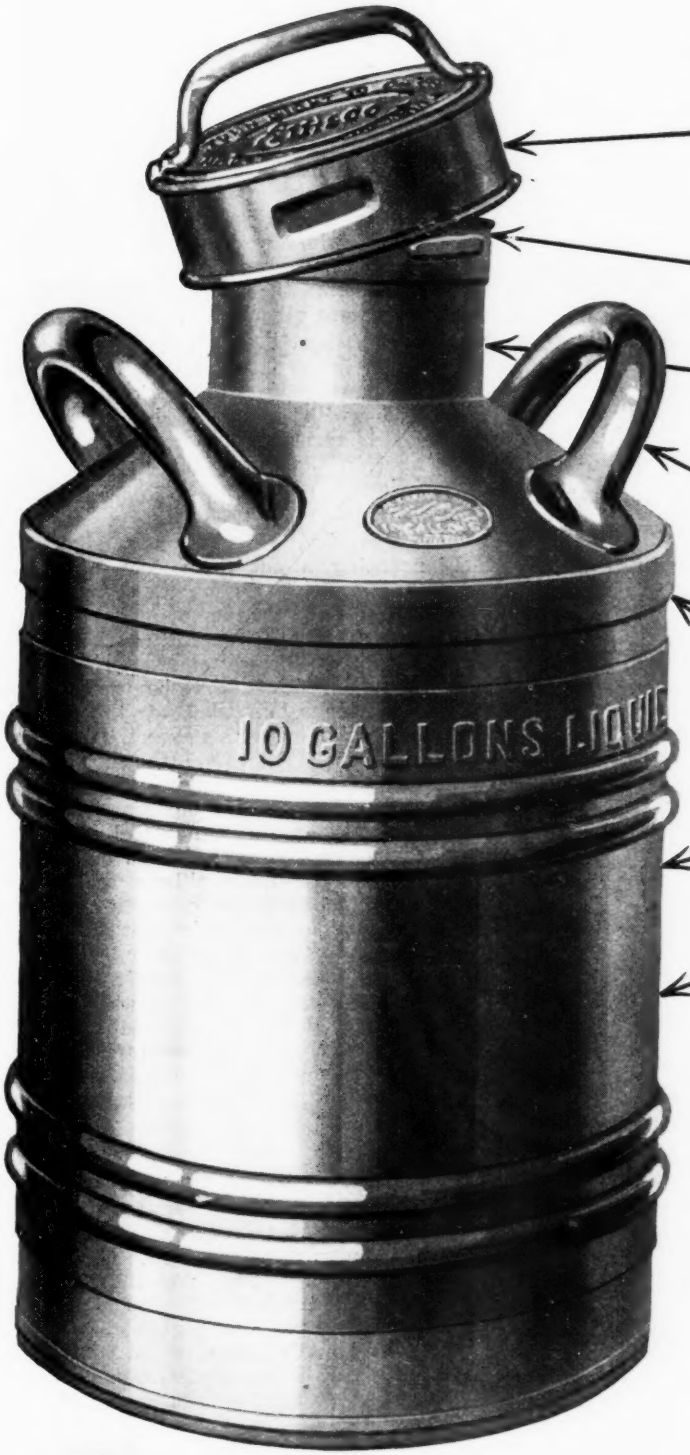
With these facts in mind, it is evident that the general quality of a lubricating oil cannot be evaluated in terms of its neutralization number. Specifications should never include limits on this property unless it is known that an oil of low organic acidity is required.

Heads Crude Oil Branch of Vacuum Oil

NEW YORK, Aug. 20.—Clyde M. Bennett, Shreveport, La., is resigning as president of the Trinidad Oilfields, Inc., and as managing director of the Trinidad Oilfields Operating Co., Ltd., to join the Vacuum Oil Co. as executive head of their crude oil department. Mr. Bennett will fill the vacancy caused by the retirement, some few months ago, of W. C. Brower, who had over 40 years' service in the oil business.

At an early date Mr. Bennett will make a tour of inspection of all the Vacuum's leases and field operations in the southwest, and will then make his headquarters at Houston. There are no changes contemplated in the Vacuum Oil Co.'s organization at Houston.

These are the features which make this oil can so popular



The new locking top which fits *over* the neck and locks or unlocks with a simple turn of the wrist. An inner gasket prevents seepage and makes the can rain-proof and dust-proof.

Large 5" opening facilitates filling, emptying and cleaning.

A brass capacity marker inside eliminates the necessity for measuring before filling the cans.

A man-sized tubular grip, shaped to fit the hand and large enough to be handled with gloves on. 5-gallon cans also come with self-centering bail handle.

Welded ⅛" steel hoops at top and bottom take the knocks and lengthen the life of the can.

A 20-gauge steel body, *perfectly smooth inside*, with all seams electrically welded, protected by a swedged steel body-jacket.

Coated with tin inside and out. This can takes any kind of oil without discoloring—and it won't corrode.

This Side Rack Oil Can comes in 5 and 10 gallon sizes—and many of the larger oil distributors are using it exclusively.

Write for catalog illustrating trade marks of some of these companies and showing complete line of Tank Truck Equipment.

Geo. D. Ellis & Sons, Inc.

220 Wood St. Philadelphia, Pa.

Measuring Cans Also

Test out some of these Ellisco 5-gallon Measuring Cans with the reinforced, jacketed body and the Tripl-Lock. Bottom seam. Put them on the toughest route and they'll show you why the large, cost-checking companies use them exclusively. Our catalog illustrates and describes them.

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REG. U.S. PAT. OFF.
SUPER-SERVICE
CANS FOR THE OIL TRADE

ESTABLISHED 1843

Service That Is Only a "Stuffed Owl" Won't Hold the Public Long

WIPING the windshield of the car—rushing to put a teacup of water in an already filled radiator—making a perfunctory pass with a polishing cloth over a foot or so of car surface.

This is service that is only a "stuffed owl," every station in town can do the same thing, this writer brings out. He is a man whose close contact with the oil marketing business over a number of years has made him a closer observer of its operations than the average gasoline and motor oil customer. It is Mr. Average Customer whose point of view he aims to set forth.

What constitutes real service, and badly needed, he believes, is giving the car thorough, expert attention on its lubrication needs. The station that is giving this kind of service doesn't need to worry about its competitors, he says. It will have its hands full taking care of customers that come back.

IF SOME of you old-timers won't mind, I'd like to tell some personal experiences on the receiving end at service stations, and some observations of station competition as it applies to me as a car owner.

Inasmuch as I do not employ a chauffeur and have to look after my car myself, therefore, I believe I see service as it actually is.

Quite a number of years ago, I had to go to the garage for everything for my car. Gas, oil, battery, tire and repair service were obtainable there and nowhere else. It was a nuisance to be obliged to nose into a garage door and be waved slowly through a crowded aisle in order to get to the back where service was available.

In time, as the result of what people wanted, gas and oil stations, tire, battery and repair shops were opened. I began to patronize them because they were handier and, what is more to the point, they gave me better service than I could get at the garage. Today, with one or two exceptions, the garages in our town have only storage to sell.

In the early days, I paid no attention to the kind of oil that was put into my engine. A quart of oil was good enough for me and, because I knew the fellows at the stations knew little, if anything, more than I did about oil, I wouldn't fall for the "Quality Oil" talks they used to give me.

One day, I read a Fuzzyoil ad. Somehow, it struck me as sounding like common sense, but it wasn't until I had read several more of their ads that I decided to try it. After several attempts, I found a dealer who had it and I bought a quart. At various times, I bought several more quarts but, seeing no particular improvement in the running of my car, I came to the conclusion that, after all, "Oil is oil."

After about another year of any old oil, I read another ad which advised having the old oil drained and a fresh supply of Fuzzyoil put in. It stated that only in that way could the real benefits of Fuzzyoil be received. I did that and, from that time, was a Fuzzyoil fan.

Many were the arguments I had with station men who tried to sell me something else or, worse yet, substitute some other oil. It didn't matter to me, particularly, where I got it, so long as I knew I was getting the genuine article. Once or twice, I bought it in cans, but decided that I would rather pay a little more for the oil and have the work done by the station man.

One day I stopped at a station for gas and, as I was about ready to leave, the attendant wiped off my windshield. I appreciated this and told him so. He said his doing that was bringing people back, which seemed to me to be an important thing. In a short time, every station in town was giving the same service, which took away from the first man to introduce it the advantage he had while he was the only one giving that kind of service.

Wondering, some time later, what he might be doing then to get ahead of his competitors, I went to his station. This time, in addition to wiping off my windshield, he filled my radiator with water. That, also, struck me as a step in the right direction as a business getter; but, in a short time, every other station man in town was doing the same thing. Again, they were all on the same level.

This particular man became the leader in the introduction of new services and inducements for people to trade with him, but he never enjoyed advantages over his competitors for long, for the other always followed with whatever he brought out that was new.

One day, he put up a sign announcing a cut of a cent a gallon on gasoline. By night, every other station had met the cut and, two days later, a competitor cut another cent. I imagine this was done to show this particular dealer that he wasn't running things but, whatever the reason, it nearly broke his heart. He had to meet the cut and the net result was that he was making two cents a gallon less profit on his gas and was still on the same level with his competitors as he had been before.

He tried fancy pillows and other premiums but his competitors were so close to his heels that he never had more than a few hours' start.

One day, when I caught him attempting to substitute another oil for Fuzzyoil, I lost interest in him and, later, was not surprised to learn that he had sold out. He had failed to solve his merchandising problem.

THE big company stations did not escape the effects of this sort of competition by any means. They met price cuts eventually and, no doubt, the giving of pillows and other premiums by the others hurt the big boys for a time at least. Sometimes the attendants at the big company stations would smother me so with courtesy that I would feel ashamed not to buy at least a tank car of gas or something. Their service was, perhaps, a little more quickly given, but, inasmuch as it was practically the same as was available everywhere else, I just dropped in anywhere for my gas but went to a selected list of Fuzzyoil dealers for my engine oil.

One day, I ran across Jim. Jim isn't much to look at and neither is his place of business. He is just another factory worker ordered to get out into the open air for the good of his health. His place is located at the intersection of two street-car line streets and I judge that his origi-

Oil Directors "In Conference"

Minutes of the meeting late in July of the directors of the National Petroleum Mutual Fire Insurance Co. probably will not show it—but part of the proceedings took place on the golf course at Seaview Golf Club, Absecon, N. J. At the left is the gallery, consisting of A. J. Squier, Warren Lubricant Co., and R. A. Wotowitch, Empire Refineries. In the center, the host of the occasion, E. S. Newbold, Welsbach St. Ill. Co. At the right and ready to play, C. E. Townsend, Sun Oil Co., Mr. Newbold, Houston Dunn, manager of the N. P. M. F. I. Co., and T. J. Hilliard, Waverly Oil Works Co., who carried off the golfing honors.

nal capital investment was not large. He said he got his first ideas about the lubrication of automobiles from what he had learned about caring for factory machinery. He had found, he said, that machinery must be oiled and greased with the right lubricant and that, if it is properly lubricated, it will wear for years and give no trouble. Believing that the same principle applied to automobiles, he spent a lot of time studying about their care and lubrication and learned everything he could about them.

At first, it was pretty hard sledding for Jim but, after a while, he said, things began to pick up around his little place. He said that, when he noticed his customers were becoming very attentive when he made suggestions to them about the care of their cars, he knew that he was winning their confidence and was on his way to success.

As he hired helpers, he spent a lot of time with each one, training and coaching them to give the kind of service he wanted his customers to have whether he was there or not.

Jim didn't sell himself to me in a minute. As I recall it, the first I noticed that his service was a little different was when he felt of my rear-axle housing and asked how long it had been since I had it looked after. In reply to my question as to why he asked, he said the housing was pretty hot, indicating more than usual friction. I told him to fix it up and couldn't help wondering why no one had ever gone into that before. He explained to me that there was usually a howling noise in the rear axle that indicated that it needed lubricating.

Once I had some bearings resign in favor of worthier successors after a long siege of noisy howling back there, but I didn't know that a little lubricant of the right sort would have avoided the trouble and expense I was put to.

From time to time, he would find places that needed attention, until driving my car clear across town to his place became a regular habit.

It wasn't long, of course, before Jim's competitors began to learn what he was doing and the money he was making, so they proceeded to imitate his methods. They built Super-stations and Greasing Palaces so beautiful that some fine homes nearby looked almost shabby by comparison. The latest ideas in signs telling about "Complete service" and "Free doping" were placed outside these magnificent buildings so you couldn't miss them. They imitated everything he did except the vitally important one which was doing a thorough, intelligent and professional job. Jim's business kept right on growing.

SOMEHOW, it reminds me of an old poem I once learned in school and had to recite on Friday afternoon. I have forgotten exactly how it ran but I do remember that the last line in every verse was, "And the barber kept on shaving." It seems that a barber had an owl on a perch and a bystander was criticising the way it was stuffed. The critic went into detail and told about the ridiculous mistake the taxidermist had made in his work on that owl. As he warmed to his subject, he brought out proof after proof that whoever did the job didn't know his business and that the result was a monstrosity. The barber never replied but kept on shaving.

The poem had an amusing climax, brought about by the fact that the owl, probably tiring of standing in one position, solemnly walked to the other end of his perch and began to look the critic over. And the barber kept on shaving. Jim is like that. He keeps on building up his business and never says a word no matter what his competitors say or do. He knows his service is no stuffed owl.

I fell for the talk of one of his competitors and, for the time being, believed that his service might be as good as Jim's. He said that Jim wasn't the only one in the world who knew how to give service on a car. A repair bill for my clutch that he overlooked sent me back to Jim for good.

A physician recently told me that, a few years ago, drug stores sold a lot of patent medicines but that, today, patent medicines have a very small sale. He further said that his practice was growing steadily, month after month, in spite of the fact that, instead of one drug store in his neighborhood, as was the case when he moved into it, there are seven today. He says that people are turning away from buying medicines as a commodity because the majority have learned that it is only valuable when intelligently administered.

Evidently the consumer of medicine has developed a sort of "Service Consciousness" as it were. At any rate, I seriously doubt if my good friend the doctor would lose any sleep if the druggists in his neighborhood cut prices on patent medicine until the cows came home, if they never came home. He and his profession render a service that raises them above that kind of competition.

Automotive engineers agree that many things should be done for automobiles and that, when they are not done, expensive parts wear out pre-

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You Sell 50 Gallons
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Turn your "drive in" customers into bulk buyers and get ALL their business. Double and treble your volume of gas and oil sales. Others are doing it. So can you with this new

Kwart Kwick Home Oil Pump

This handy pump fits any drum or barrel. Ideal for home garages, working equally well with oil, gas or other liquids. Nominal in cost — long wearing. Built of finest brass, steel and cast iron. Big discounts to oil companies for quantities.

Write for details of special sales plan now succeeding for many companies. Mail the coupon below.

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Town..... State.....

maturely and trouble and expense is the needless result. I am told, for instance, that many a comparatively new car shows, by its performance, that it has a worn universal joint, the result of lack of intelligent attention. It may have been "Greased" but the proper lubricant has not been applied. As one man, who should know, puts it, "The majority of people pay attention to their automobile horses (the engine) but neglect the wagon (the chassis)."

I am convinced that the day when the "Crowd" will demand what they should have is just around the corner. Everything points to exactly that. The fact that Jim's place has few slack moments indicates that people will respond to real service and pay liberally for it, for his service is not free. When "Complete service" is advertised, should it be intelligent, professional service rendered by trained men who really know what should be done and how to do it, or can any good, honest young man pick it up in a few days?

It seems to me that, if the oil business is suffering from a surplus of stations, the most logical way to reduce that surplus would be to materially raise the standard of service for automobiles—not merely pretend to but do it. Anybody can meet price and premium competition by merely changing their minds, but give them something to learn that takes time, money and effort to get and they become discouraged and fade out of the picture.

Am I particular about the gasoline I use? Yes, and I know that a man who would take the trouble to learn how to keep my car running smoothly with a minimum of wear, through correct lubrication, would also take the pains to look into the merits of the different gasolines. At any rate, I'm satisfied.

Standard Oil Agents Meet

RICHMOND, Va., Aug. 20.—The Standard Oil Co. of New Jersey recently held a business meeting and banquet for its agents and employes in the Bristol (Va.-Tenn.) district at Hotel Lincoln, Marion, Va., presided over by J. D. Sparks, district manager. Those present were: J. D. Sparks, district manager, and J. P. Wardlaw, general salesman, Bristol; L. H. Dewey, Pulaski; Wilson W. Scott and Ernest V. Snider, Marion; Frank E. Nelms and Ebb Shupe, Rural Retreat; J. P. Graham and A. O. Comber, Abingdon; G. B. Kite and Sanders Ratcliff, Glade Spring; Claude Stroud, Sytheville; M. F. Lindamood, Max Meadows; D. N. Sufflebarger and Guy Bruce, Bastain; Ryland Craft, Rufus McClellan and French McClellan, Gate City; W. T. Hammer, Ed Weaver, O. F. Wyatt, Lewis Widner and Clarence Dutton, Bristol.

Galena of Texas Out Of Receivership

HOUSTON, Aug. 17.—J. Y. Powell, attorney for the Galena Signal Oil Co. of Texas, has been elected its president, succeeding W. N. Long, who becomes active vice-president in charge of operations. A receivership affecting the company was terminated last week, when District Judge Montieth at Houston dissolved it, discharging McDonald Meachum, Houston attorney, from further duties.

The receiver was appointed about six months ago on petition of the Galena Signal Oil Co. of Pennsylvania, the parent organization of the Texas subsidiary. T. P. Lee and other Houston stockholders questioned the right to appoint a receiver on motion of the parent company, which was itself solvent. Appeal resulted in the remanding of the case for dissolution of the receivership.

Tentative agreement is reported from New York to have been reached for purchase of the Galena Signal of Texas by The Texas Corp. A vote to ratify or reject this agreement is to be held in New York in September.

The principal assets of the Galena Signal of Texas consist of a refinery on the Houston ship channel, which has been operated spasmodically for the last year, and its foreign marketing facilities.

Andrews Named Umpire For Howard Area

HOUSTON, Aug. 16.—E. E. Andrews, independent operator of Abilene and formerly of Oklahoma, has been named umpire in the Roberts-Settles deep lime area of Howard-Glasscock counties, where prorating of production became effective Aug. 15.

The appointment of Mr. Andrews was confirmed by the railroad commission, which acted on recommendations of an advisory committee composed of operators in the newly prorated area.

Members of the advisory committee consist of R. T. Piner, banker, of Big Springs, representing Mrs. Dora Roberts, principal royalty owner, as chairman; W. T. Fleming of the F. H. E. Oil Co., Sherman; I. G. Harmon, Marland Production Co., Ponca City; Frank T. Pickrell, Texon-Group 1 companies, Fort Worth and Big Lake; George C. Matson, Schermerhorn Oil Co., Tulsa; Virgil Hicks, Laurel Oil & Gas Co., Tulsa; and J. S. Cosden, Cosden & Co., Inc., Fort Worth.

California Refiners Win In Rate Contest

WASHINGTON, Aug. 20.—The Texas Co., the Panhandle Oil Co., the Continental Oil Co. and the Continental Oil Co. of Texas have lost the first phase of a fight they have been making, since July, 1927, to get into Arizona and New Mexico on better terms, from Gates and Port Arthur, Tex., Tulsa, and other Mid-Continent and Texas refining points.

By the same sign the Standard Oil Co. of California, Standard of Arizona, Shell of California, Shell of Arizona and Union of California and Arizona have won. The Texas Co., and other companies on its side in the fight are in Arizona and New Mexico but they have been fighting for freight rates that will give them a wider distribution and a wider margin in the marketing they are doing now.

The California refiners objected to any change in the freight rate adjustment in favor of the Mid-Continent refiners.

A tentative report has been issued recommending that the rate on refined products of 80 cents from Los Angeles to Arizona be cut to 70 cents and the 93-cent rate to New Mexico be cut to 80 cents.

The Mid-Continent refiners asked for an average cut of 32.5 cents per 100 pounds in the rates to Arizona points and an average cut of 26.6 cents per 100 pounds, to the New Mexico points. The Californians pointed out that they had made themselves parties to the Arizona Corporation case and they objected to any such cuts as the Mid-Continent and Texas refiners asked.

The Texas Co. asked for rates on the basis of the oil rates established in the Consolidated Southwestern cases, recently decided, on the theory that transportation conditions in Arizona and New Mexico were the same as in Texas "differential" territory, which, roughly speaking is the western two-thirds of Texas.

The railroads roared at the proposal. They pointed out that to make the reductions on the traffic of The Texas Co. alone would cause a cut of $199,420 a year in their revenues. They said that that would force them to raise rates on other commodities and thereby place a burden on other traffic such as was forbidden by law.

Attorney-Examiner George M. Curtis has recommended the dismissal of three cases brought by the Texas and Mid-Continent refiners.

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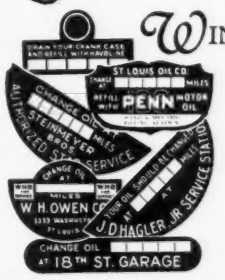

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Mid-Continent Light Oil Prices Rise; Spot Kerosene is Scarce

Staff Special
TULSA, Aug. 18

MID-CONTINENT light oils moved to higher ground the week ended Aug. 18. Exporters bought gasolines in both north Texas and Kansas and made inquiries in other areas. Jobbers continued to order out their maximum allotments on contracts but the spot demand toward the end of the week was lighter.

Kerosene prices advanced in all areas with refiners reporting they are oversold. Goods of both the 41-43 and the 42-44 water white grades were extremely scarce for spot shipment.

Natural gasolines were slightly higher in price, both in Oklahoma and Texas, although demand was relatively quiet.

Distillates were higher in price in sympathy with higher kerosene prices. Gas oil was in demand from both domestic buyers and refiners requiring crackable goods.

Fuel oils were unchanged in price with demand lighter since the middle of August.

Neutral oils were unchanged, although bright stock was slightly higher. Wax prices also advanced with buying brisk and refiners low on stocks.

Gasolines

An export company early in the week bought 1,000,000 gallons of 64-66, 375 e. p. gasoline from a large Kansas refiner at 10.50 cents a gallon, north Texas export rate. This price will net the refiner 10.40 cents a gallon. Another export company bought a small quantity of high gravity gasolines in north Texas, while still another company which does little export business except on natural gasolines bought approximately 600,000 gallons of 64-66, 375 e. p. gasoline at 10.50 and 10.625 cents a gallon. In all something over 2,000,000 gallons of gasoline were bought for export during the week.

The fact that one company bought in Kansas, is taken as an indication that north Texas refiners are so completely sold up they cannot accept any new business at present. Reports from the Wichita Falls area indicate that refiners have export orders on their books which will keep them busy until after Sept. 1.

The Standard Oil Co. of Ohio has been inquiring for gasolines in north Texas, and at least one sale was reported closed, but the details have not been revealed. The Ohio company is known to have been buying considerable gasoline on the outside for two or three months.

Domestic gasoline buying was slower toward the end of the week although contract orders continued at a brisk pace. Jobbers were buying more low gravity gasolines as their margins were being slowly cut down because of the advancing prices for goods at the refinery. The scarcity of all grades of refined gasolines, however, kept the light oils market strong.

Natural Gasolines

A small buying flurry which developed Aug. 11 held sway until around Aug. 15 but generally speaking natural gasolines were quiet at the close of business Aug. 18. Two or three buyers required grade AA and the demand was sufficiently large to cause the price of that commodity to break away from the lower grades for two or three days. Buyers of naturals who could use any grade did not permit this situation to be more than temporary. They began demanding the lower and cheaper grades in sufficient quantities to cause prices to move back on a level with grade AA. While goods for spot shipments have been relatively scarce all month, two or three buyers reported late in the week that they were having more goods offered for both spot and deferred shipment than was the case a week or so ago.

Kerosenes

Scarcity of all grades of kerosene caused price advances in all areas. Price of 41-43 w. w. grade in Oklahoma advanced 0.25 cent, with both jobbers and refiners buying. Reports from the agricultural centers indicate consumption of kerosenes has been abnormally heavy the past two or three weeks. Stocks in all areas except Kansas are lower than they were at this time last year.

Louisiana and Arkansas refiners report they are virtually out of kerosene and will be unable to supply their regular trade for the remainder of this month. The same situation is reported in Texas, while the Oklahoma refiners say they are behind on shipments. The Kansas refiners with the possible exception of two or three, report they have been compelled to buy some goods on the outside to supply their regular customers.

Distillates and Gas Oil

A slight upturn in stove distillate prices has been noted. Only a small amount of 38-40 straw distillate was available in Oklahoma Aug. 18 at 3 cents a gallon, and goods were relatively scarce at any price. This probably can be accounted for in part by the higher kerosene prices. With 41-43 water white kerosene above 6 cents, refiners can profitably cut down their distillate yield and increase their kerosene cuts.

Jobber buying of distillates has been only fair. The larger jobbers who have ample storage have been the only purchasers with the possible exception of a few small municipal light and power plants. It probably will take one good cold spell to bring any increased activity to the distillate market. Most jobbers have their tanks full and will not be compelled to buy from refiners as soon as the cold weather arrives. A few days of cold weather, however, will reduce their stocks to where they will have to purchase replacements.

No changes in price of gas oil was noted. Buying has continued good from both industrials and refiners with cracking units. One large refiner

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Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Aug. 20	Prices Aug. 13	Prices Aug. 6
52-54 Napthha	11.00 –11.50	10.75 –11.00	10.25 –10.75
54-56 Naphtha	11.00 –11.25	10.75 –11.00	10.25 –10.75
58-60 U.S. Motor 437 e.p.	11.75 –12.00	11.25 –11.50	11.00 –11.25
60-62 400-410 e.p. gasoline	12.25 –12.50	11.50 –12.00	11.50 –12.00
64-66 390 e.p. gasoline	12.75 –13.00	12.00 –12.50	11.75 –12.50
68-70 Str-run gas. 350-360 e.p.	13.00 –14.00	13.00 –13.50	12.50 –13.00
OHIO (Quotation of S. O. Ohio.)			
58-60 U.S.Motor,delivered in Ohio, tax to be added	No spot quotations		12.75
OKLAHOMA			
48-50 540 e.p. naphtha	†9.00 – 9.125	†8.75	†8.50 – 8.75
50-52 450 e.p. naphtha	†9.00 – 9.125	†8.75	†8.50 – 8.75
56-58 450 e.p. gasoline	9.25 – 9.50	9.125– 9.25	9.00
58-60 450 e.p. gasoline	9.25 – 9.50	9.25	9.00 – 9.25
64-66 390 e.p. gasoline	10.50 –10.75	10.50	10.25
68-70 350-360 e.p. gasoline	11.00	10.75 –11.00	10.75 –11.00
OKLAHOMA (Weighted Average Prices)			
58-60 U.S. Motor, 437 e.p.	9.7279	9.6850	9.5227
60-62 437 e.p. gasoline	9.8750	9.9861	9.7361
60-62 400 e.p. gasoline	No sales	10.3571	9.9167
64-66 375 e.p. gasoline	10.9167	10.8333	10.3438

Above are weighted average prices, current week's prices being effective on Saturday, instead of Monday, the last day on which weighted averages are available for publication in this table. Weighted average prices for the current Monday are published on page 20 of this issue. The two previous weeks' prices shown are corrected to show Monday's prices, effective on the dates shown at the top of the columns.

KANSAS (F. O. B. refinery Kansas destination)			
58-60 U.S. Motor 437 e.p.	9.875	9.75 – 9.875	9.625– 9.75
60-62 400 e.p. gasoline	10.50	10.25	10.00 –10.25
64-66 375 e.p. gasoline	10.75	10.75	10.50
NORTH TEXAS			
48-52 450 e.p. naphtha	†9.00	†9.00	†8.75 – 9.00
56-58 450 e.p. gasoline	†9.00 – 9.25	†9.00	†9.00
58-60 450 e.p. gasoline	†9.25 – 9.50	†9.25	†9.00 – 9.25
58-60 U.S. Motor 437 e.p.	9.75	9.75	9.625– 9.75
60-62 400 e.p. gasoline	10.25	10.25	10.00
64-66 390 e.p. gasoline	10.50	10.375–10.50	10.25
64-66 375 e.p. gasoline	10.625–10.75	10.625–10.75	10.50 –10.75
68-70 350-360 e.p. gasoline	11.00	10.75 –11.00	10.75 –11.00
NORTH LOUISIANA (N. La.. Ark. and Miss. destination)			
58-60 U.S. Motor gasoline	**10.25–10.50	10.25	10.00
ARKANSAS (Arkansas destination only)			
56-58 450 e.p. gasoline	9.75	9.00	9.00
58-60 450 e.p. gasoline	10.00	9.25	9.25
58-60 U.S. Motor 437 e.p.	10.50	10.25	10.00
‡CALIFORNIA			
54-58 U.S. Motor 437 e.p.	9.00 –12.50	9.00 –12.50	9.00 –12.50
58-61 U.S. Motor 437 e.p.	9.50 –13.50	9.50 –13.50	9.50 –13.50
42-45 Eng. dis. 445-480 e.p.	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00

‡3c tax to be added to California gasoline prices if used in state

NATURAL GASOLINE

(Note. End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	10.75	10.75	10.375–10.50
Grade A, 72-79.9, 90% Recovery	10.75	10.75	10.375–10.50
Grade BB, 84-92, 85% Recovery	10.75	10.50	10.375–10.50
Grade B, 76-83.9, 85% Recovery	10.75	10.50	10.375–10.50
Grade C, 80-92, 78% Recovery	10.75	10.50	10.375–10.50
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	10.75	10.75	10.375–10.50
Grade A, 72-79.9, 90% Recovery	10.75	10.75	10.375–10.50
Grade BB, 84-92, 85% Recovery	10.75	10.50	10.375–10.50
Grade B, 76-83.9, 85% Recovery	10.75	10.50	10.375–10.50
Grade C, 80-92, 78% Recovery	10.75	10.50	10.375–10.50
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†11.00	†11.00	†10.75 –11.00
Grade BB	†11.00	†10.75 –11.00	†10.75 –11.00
Grade C	†11.00	†10.75 –11.00	†10.75 –11.00
CALIFORNIA			
75-85, 375-390 e.p. blend	6.75 – 7.00	6.75 – 7.00	6.50 – 7.00

MOTOR FUEL BLENDS

OKLAHOMA			
64-66 Blend 437 e.p.	non available	†9.50	†9.00

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.75 – 7.00	6.50	6.00 – 6.25
46 w.w. kerosene	7.00 – 7.25	6.75 – 7.00	6.50 – 7.00
47 w.w. kerosene	7.25 – 7.50	7.00 – 7.25	6.75 – 7.25
300 mineral seal	7.50 – 7.75	7.25 – 7.75	7.25 – 7.75
OKLAHOMA			
41-43 w.w. kerosene	6.25	6.00	5.50 – 5.75
42-44 w.w. kerosene	6.50	6.25 – 6.50	6.00 – 6.25
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	6.50	6.25	5.75 – 6.00
42-44 w.w. kerosene	6.75	6.50 – 6.75	6.25 – 6.50
NORTH TEXAS			
40-42 w.w. kerosene	5.75	5.75	5.125
41-43 w.w. kerosene	6.00	6.00	5.50 – 5.625
NORTH LOUISIANA (N. La. Ark. and Miss. destination)			
41-43 w.w. kerosene	6.50	6.00 – 6.25	5.75 – 6.00
ARKANSAS (Arkansas destination only)			
42-44 kerosene	6.75	6.50	5.75 – 6.00
CALIFORNIA			
38-40 w.w. kerosene	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00

NEUTRAL OIL

Vis.				
PENNSYLVANIA		(Viscosity at 70°F.)		
200	No. 3 Assoc. Filt.	30.50 –32.00	31.50 –33.00	31.50 –33.00
180	No. 3 Assoc. Filt.	28.00 –30.00	30.00 –31.50	30.00 –31.50
150	No. 3 Assoc. Filt.	25.00 –26.00	25.50 –27.00	26.00 –27.00
		(Non Viscous)		
34	Grav. 330-340 Flash	7.50 – 9.00	7.50 – 9.00	7.50 – 9.00
36	Min. Neut, 300-305 Flash	6.50 – 7.50	6.50 – 7.50	6.50 – 7.50
	OKLAHOMA			
Vis.	Color	(Viscosity at 100°F.)		
100	No. 2	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
150	No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150	No. 4	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180	No. 3	9.00 –10.00	9.00 –10.00	9.00 –10.00
180	No. 4	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
180	No. 5	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
200	No. 3	9.625–11.00	9.625–11.00	9.625–11.00
200	No. 4	9.50 –10.75	9.50 –10.75	9.50 –10.75
200	No. 5	8.50 –10.00	8.50 –10.00	8.50 –10.00
220	No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220	No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220	No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240	No. 3	13.50 –14.00	13.50 –14.00	13.50 –14.00
240	No. 4	13.25 –13.50	13.25 –13.50	13.25 –13.50
240	No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280	No. 3	15.50 –16.50	15.50 –16.50	15.50 –16.50
280	No. 4	15.25	15.25	15.25
280	No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300	No. 5-6	17.00	17.00	17.00
	GULF COASTAL			
Vis.	Color	(Viscosity at 100°F., pour test 0)		
100	No. 2 Unfilt. Pale	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
200	No. 3 Unfilt. Pale	10.50 –10.75	10.50 –10.75	10.50 –10.75
300	No. 3 Unfilt. Pale	11.50 –11.75	11.50 –11.75	11.50 –11.75
500	No. 3½ Unfilt. Pale	13.50 –13.75	13.50 –13.75	13.50 –13.75
750	No. 4 Unfilt. Pale	15.75 –16.00	15.75 –16.00	15.75 –16.00
200	No. 5½ Red Oil	8.50 – 8.75	8.50 – 8.75	8.50 – 8.75
300	No. 5½ Red Oil	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
500	No. 6 Red Oil	11.00 –11.25	11.00 –11.25	11.00 –11.25
750	No. 6 Red Oil	13.75 –14.00	13.75 –14.00	13.75 –14.00
	CALIFORNIA			
Vis.	Color	(Viscosity at 100°F.)		
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50 –12.00	11.50 –12.00	11.50 –12.00
300	No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
450	No. 3	15.50 –16.00	15.50 –16.00	15.50 –16.00
550	No. 3	16.50 –17.00	16.50 –17.00	16.50 –17.00
600	No. 3	17.00 –17.50	17.00 –17.50	17.00 –17.50
200	No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
300	No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
400	No. 5	14.00 –14.50	14.00 –14.50	14.00 –14.50
500	No. 5	15.00 –15.50	15.00 –15.50	15.00 –15.50
600	No. 5	16.00 –16.50	16.00 –16.50	16.00 –16.50
700	No. 7	18.00 –18.50	18.00 –18.50	18.00 –18.50

CYLINDER STOCKS

****OKLAHOMA**			
190-200 Vis.at 210° Brt.St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis.at210° Brt.St.	25.00	23.00 –25.00	23.00 –25.00
600 E.St.140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	8.00 –10.00	8.00 –10.00	8.00 –10.00
600 St. Ref. Dark Green	6.00 – 8.00	6.00 – 8.00	6.00 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA	(1-inch Immersion Test)		
600 Steam Refined	12.50 –13.50	12.50 –13.50	12.25 –13.50
650 Steam Refined	14.50 –16.50	14.50 –15.50	14.50 –15.50
600 Flash	18.00 –18.50	17.50 –18.50	17.50 –18.50
625 Flash	26.00 –28.00	26.00 –29.00	26.00 –29.00
600 Warren E	18.50 –19.00	18.50	18.50
600 Oil City E	17.00 –18.00	16.00 –17.50	16.00 –17.50
600 D Filtered	22.50 –24.50	22.50 –24.50	22.50 –24.50
Cold Test Stock, 40-50 p. p., 140-150 vis. at 210° 540-550 flash, No.8color	36.00 –36.50	36.00 –36.50	36.00 –36.50
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	34.00 –34.50	34.00 –34.50	34.00 –34.50

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

†Prices nominal ††Only one refiner quoting *Quotations only **Represents both sales and quotations

"What's in a name?" "EVERYTHING", *answers the American Public - - -*

THE American public buys on faith and repeats on confidence.

Confidence forms the very foundation on which the structure of satisfactory relationship between buyer and seller exists.

"Defiance" performance—based on years of experience in studying the practical requirements of the oil industry—is the explanation of the high regard in which "Defiance" Steel Barrels are held in the industry.

Our constant care is to see that this reputation is upheld through consistently maintaining the quality that has identified "Defiance" Steel Barrels with a high degree of value among buyers in the oil industry.

THE AMERICAN STEEL PACKAGE CO.
Defiance, Ohio

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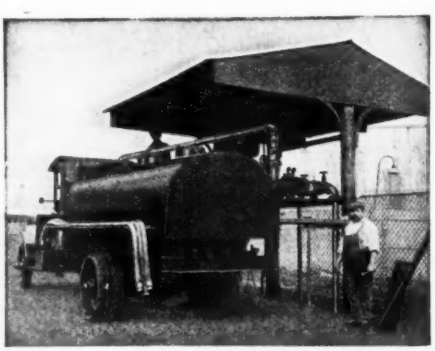
Distinguished for Honest Value



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has a standing offer of 2.375 to 2.50 cents a gallon for straight reduced gas oil, and has been obtaining all the surplus gas oil in both Oklahoma and Texas.

Fuel Oils

The activity in fuel oils which was noticeable around the first of the month had subsided before the end of the second week. There were still a few inquiries in the field for higher gravity low cold test fuel oils for September and October delivery, but the low gravity fuels were in little demand.

The buying around the first of the month, however, apparently was of sufficient volume to prevent any weakening in prices. The trade in this area apparently are of the opinion that fuel oils are on a firmer basis than they have been for some time past.

North Texas refiners indicate they are virtually sold up on fuel oils for the remainder of this month. The M. K. & T. railroad surprised the refiners in that district recently by asking for bids for the road's requirements for the next 90 days. The road bought approximately 125 cars a month for delivery over August, September and November. The other railroads in the north Texas area which are regular buyers also placed their usual orders before the middle of the month, with the result that the fuel oil market in the Wichita Falls district is at least 5 cents a barrel better than it was at the beginning of the month.

Little change has been noted in the fuel oil situation in Arkansas, Louisiana or Kansas.

Neutral Oils, Cylinder Stocks, Wax

No price changes were announced during the week for neutral oils. Demand continued to hold up well, a majority of refiners reported. Price of 150-160 vis. 210 bright stock was well pegged at 25 cents a gallon, as compared with a range a week ago of 23 to 25 cents.

Wax prices in Oklahoma have advanced under the stimulus of active buying and scarcity of the commodity. Virtually every refiner in the field reports being sold up for August with several committed through September. Buying has been for August and September delivery, with a few inquiries for October shipment. Price of 124-126 white crude scale wax in Oklahoma Aug. 18 was 4.50 to 4.75 cents.

Correction

In the refinery market table on page 108 of the Aug. 15 issue of NATIONAL PETROLEUM NEWS, in the column dated Aug. 13, prices of 38-40 straw distillate in Oklahoma and North Texas were in error. Prices should have been:

Oklahoma 38-40 distillate 3.00
North Texas 38-40 distillate 2.875-3.00

Prices published were 2.875 to 3.00 and 2.75 to 3.00 cents respectively.

CLYDE M. BENNETT
Manager Vacuum Oil Co.'s crude oil department

Bennett Heads Vacuum's Crude Department

HOUSTON, Aug. 17.—Clyde M. Bennett, formerly president of the Trinidad Oil Fields Operating Co., Ltd., has been appointed manager of the crude oil department of the Vacuum Oil Co., at New York headquarters, filling a position made vacant by the retirement a year ago of W. C. Brower. Mr. Bennett will be the Vacuum's executive in general charge of all crude oil affairs, in domestic territory and abroad.

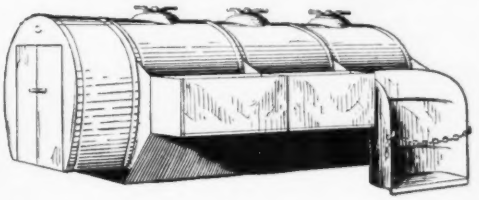
Before going to New York several years ago as president of the Trinidad Oil Fields Operating Co., Ltd., Mr. Bennett had been vice president and general manager of the Louisiana Oil Refining Corp., with Shreveport headquarters. Previously he had served successively as chief geologist and land manager of the Louisiana company. Before that he was identified with Louisiana-Arkansas operations of the Arkansas Natural Gas Co.

Master Appointed in Oil Suit

HOUSTON, Aug. 18.—Thomas B. Blanchard of the law firm of Wolters, Blanchard, Woodal & Wolters, has been appointed standing master in the case of the Chase National Bank and C. B. Hibbard of New York against Swiftsure Petroleum Co., and Terminal Oil & Refining Co. Hibbard and the Chase National Bank are seeking to collect $210,000, which briefs in the case say was borrowed by Swiftsure and secured by properties of the allied Terminal company. Col. H. B. Moore of Texas City was appointed receiver for the two companies when suit was filed. Officers of the two companies opposed the receivership, saying all obligations of the two concerns could have been paid had they been allowed to operate.

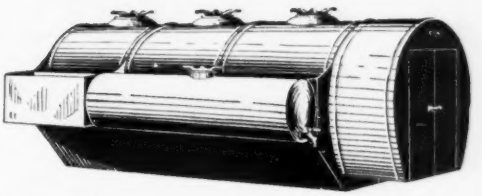
Convertible Truck Tank $150

Capacity Changes to Fit Current Demand and Road Conditions



In an hour a section of the side can racks is replaced with barrel carrier. 50 extra gallons may be carried on each side of the tank. Ride low down without making load top heavy.

Take off two sections of side racks on each side, replace with either 30 or 50 gallon side tanks and extra demand for gasoline, kerosene or lube oil is easily handled. Conversion is made in an hour's time.



Capacity of tank is 375 gallons. Side racks will handle 120 extra gallons in cans. Combination of side racks and side tanks gives up to 140 extra gallons. Combination of side racks and barrel carriers gives 180 extra gallons capacity.

COLUMBIAN Partition Mounted 3 Point Supported TRUCK TANK

Interchangeable on Chevrolet Trucks or New Ford Truck or others with back of cab lengths around 80 inches. 3-point supported. The tank, the mounting, the pipe lines and the bucket box are welded into an integral unit of steel. $150.00 includes side racks f. o. b. Kansas City. Faucets, side tanks and barrel racks are extra.

COLUMBIAN STEEL TANK COMPANY
KANSAS CITY, MISSOURI

Rotary Lift

New Models Are Now Ready for Shipment

Write or wire for descriptive literature and new prices

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Memphis, Tennessee

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

WAX

PENNSYLVANIA	Prices Aug. 20	Prices Aug. 13	Prices Aug. 6
Per pound, New York			
122-124 white crude scale	4.75	4.75	4.50 – 4.75
124-126 white crude scale	4.75	4.75	4.50 – 4.75
OKLAHOMA			
**124-126 White Crude Scale	4.50 – 4.75	4.25	4.25
CALIFORNIA			
White crude scale, per pound, ton lots	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
30-34 fuel oil	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
28-32 fuel oil	4.125– 4.50	4.125– 4.50	4.125– 4.50
OKLAHOMA			
38-40 straw distillate	3.00 – 3.125	3.00	2.875– 3.00
36-38 straw distillate	2.875	2.75 – 2.875	2.75
32-36 gas oil, straw	†2.50 – 2.75	†2.50 – 2.75	†2.50 – 2.75
32-36 dark gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
28-30 fuel oil (in bbls.)	$0.85 – 0.875	$0.85 – 0.875	$0.85 – 0.875
26-28 fuel oil (in bbls.)	$0.675– 0.725	$0.675– 0.725	$0.675– 0.725
24-26 fuel oil (in bbls.)	**$0.65– 0.675	**$0.65– 0.675	*$0.65 – 0.675
22-26 fuel oil (in bbls.)	**$0.575–0.625	**$0.575–0.625	*$0.575– 0.625
18-22 fuel oil (in bbls.)	**$0.55– 0.60	**$0.55– 0.60	*$0.55 – 0.60
16-18 fuel oil (in bbls.)	**$0.55	**$0.55	*$0.55
14-16 fuel oil (in bbls.)	**$0.55	**$0.55	*$0.55
KANSAS (F. O. B. refinery Kansas destination.)			
38-40 straw distillate	3.50 – 3.625	3.50	3.50
36-38 straw distillate	3.125– 3.375	3.125	3.125
32-36 gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
24-26 fuel oil	*$0.75– 0.80	*$0.75– 0.80	*$0.75 – 0.80
18-22 fuel oil	*$0.70	*$0.70	*$0.70
NORTH TEXAS			
38-40 straw distillate	2.875– 3.00	2.875– 3.00	2.75 – 3.00
32-36 gas oil, cracked	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
32-36 gas oil, uncracked	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
24-26 fuel oil (in bbls.)	$0.525– 0.55	$0.525– 0.55	$0.50 – 0.55

†Prices Nominal ††Only One Refiner Quoting *Quotations only

GULF COASTAL	Prices Aug. 20	Prices Aug. 13	Prices Aug. 6
Fuel (in bbls.)	$1.20 –$1.25	$1.20 –$1.25	$1.20 –$1.25
Gas oil	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
32-36 gas oil, dark	2.625– 2.875	2.625– 2.875	2.625– 2.875
32-36 gas oil, straw	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
16-20 fuel oil (in bbls.)	$0.70	$0.70	$0.70
ARKANSAS (Arkansas destination only)			
32-36 gas oil, straw	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
32-36 gas oil	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
28-32 gas oil	2.75	2.75	2.75
Road Oil	$1.15	$1.15	$1.15
CALIFORNIA (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)	$0.65 –$0.70	$0.65 –$0.70	$0.65 –$0.70
14-18 Bunker oil (in bbls.)	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
30-34 gas oil (in bbls.)	$1.00 –$1.20	$1.00 –$1.20	$1.00 –$1.20
27 Plus Diesel oil (in bbls.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f.o.b. refinery. ½c to ¾c per pound less.)	Quotations of two refiners.		In tank cars
Snow White	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
Lily White	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Cream White	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
Light Amber	3.50 – 3.625	3.50	3.50
Amber	3.25	3.25	3.25
Red	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00

PETROLEUM COKE

**OKLAHOMA

(Per ton in car lots)

Lump	$4.50 – 5.00	$4.50 –$5.00	$4.50 – 5.00
Still run	$3.00	$2.75 –$3.00	$2.75 – 3.00
Breeze	$2.00	$1.75 –$2.00	$1.75 – 2.00

**Represents Both Sales and Quotations

Cal. Quotations Unchanged Despite Crude Increase

LOS ANGELES, Aug. 18

ANNOUNCEMENT of an increase in prices of refinable crude oils in California above 20 gravity, effective Aug. 15, served to muddle the general petroleum products market situation this week.

Many refinery officials feel that new crude prices would justify higher prices for other products. At the close of this week, however, there were no material changes in quotations. Gasoline and fuel oil could probably be bought at prices in effect prior to the change.

The increase in light crude prices came as somewhat of a surprise. Most oil men thought a change would be announced the last week in the month, to become effective Sept. 1.

The new prices start with 21 gravity, leaving the lower grades at former figures. Probably 80 per cent of the crude produced at Long Beach averages between 25 and 27 gravity, and the new prices are an increase of 15 cents for 25 gravity and 19 cents increase for 27 gravity.

At Santa Fe Springs, most of the production ranges around 33 to 34 gravity. These two grades were increased 36 and 41 cents, respectively.

Although the total daily average production at Rosecrans and Dominguez is relatively small, the gravity of the production is higher than in most fields. In these fields, including the new field at Elwood Terrace near Santa Barbara, 24 gravity oil was raised 12 cents to $1.01, while 35 gravity oil was increased 38 cents. The lone discovery well at Elwood Terrace is producing 39 gravity oil, which was raised 50 cents to $1.77. Under new scale, 42 gravity oil was raised 59 cents to $1.95.

All companies purchasing oil in California met the prices, which were first posted by Standard of California. Union Oil Co. adopted the Standard's schedule at Santa Maria (Orcutt) and Ventura, where the Standard does not buy.

U. S. Motor for export is holding around 8.50 to 9 cents, although one or two companies say they have no U. S. Motor for sale at this price. Three cargoes of 390 and 400 end point gasoline were sold this week for movement to the East Coast and it is understood that this product is to move at 9.25 cents for 390 end point and 9 cents for the 400 stuff.

Natural gasolines are holding their new strength, with a tendency to further increase in price as the supply of material on the spot market grows smaller through signing of long time contracts, although stocks are almost a million barrels.

Recently one company exported a cargo of natural gasoline to Europe by adding 10 per cent heavy product to meet shipping requirements, but it is not likely that much natural gasoline will be shipped by tanker for some time to come. Spot natural gasoline was moving this week at 6.75 to 7 cents. Most of the recently signed contracts were at 10.50 cents under the service station price of gasoline without tax, giving the manufacturer net 7 cents.

Fuel oil is moving in tank cars at 65 to 70 cents, although a little distress stuff was recently sold at 60 cents. Fuel for export can be bought at 70 to 75 cents.

Kerosene is showing some strength but quotations are unchanged. Gas oil continues scarce, but with old prices holding where a cargo can be secured.

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended August 17 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended Aug. 17	Total Week Ended July 20
Plants Reporting	12	29	28	12	81	80
Crude Capacity	92,000	160,200	127,600	54,900	434,700	431,700
Cracking Capacity	30,700	52,600	17,200	22,700	123,200	123,200
Da. Av. Crude Runs	74,164 + 16.1	127,481 + 7.4	90,209 + 7.7	62,882 + 7.6	354,736 + 9.2	352,790
Da. Av. Other Oils	8,337 + 19.5	7,249 + 24.7	4,436 — 25.0	864 + 89.9	20,886 + 9.0	21,598
GASOLINE—Gallons						
Stocks, Aug. 10	8,787,000	22,570,000	12,600,000	3,036,000	46,993,000	66,286,000
Prod. 8-10 to 8-17	11,185,000 + 13.2	20,140,000 + 6.6	10,066,000 + 3.7	5,420,000 + 3.8	46,811,000 + 7.1	47,153,000
Ship. 8-10 to 8-17	11,099,000 + 6.2	20,912,000 — 0.8	9,495,000 — 14.2	5,528,000 + 21.4	47,034,000 — 0.3	50,805,000
Stocks, Aug. 17	8,873,000 + 1.0	21,798,000 — 3.4	13,171,000 + 4.5	2,928,000 — 3.6	46,770,000 — 0.5	62,634,000
Ratio Sales to Prod.	99.2%	103.8%	94.3%	102.0%	100.5%	107.7%
KEROSENE—Gallons						
Stocks, Aug. 10	8,570,000	2,902,000	1,450,000	344,000	13,266,000	14,154,000
Prod. 8-10 to 8-17	2,253,000 + 22.2	2,937,000 — 3.6	1,394,000 — 6.3	225,000 — 15.1	6,809,000 + 2.5	6,734,000
Ship. 8-10 to 8-17	2,006,000 + 12.4	2,994,000 — 11.5	1,438,000 — 14.7	323,000 — 13.9	6,761,000 — 6.5	6,362,000
Stocks, Aug. 17	8,817,000 + 2.9	2,845,000 — 2.0	1,406,000 — 3.0	246,000 — 28.5	13,314,000 + 0.4	14,526,000
Ratio Sales to Prod.	89.0%	101.9%	103.2%	143.6%	99.3%	94.5%
STOVE DISTILLATE—Gallons						
Stocks, Aug. 10	2,149,000	2,819,000	568,000	72,000	5,608,000	4,958,000
Prod. 8-10 to 8-17	27,000 — 88.5	461,000 + 32.1	153,000 + 4.1	68,000 — 42.9	708,000 — 15.9	904,000
Ship. 8-10 to 8-17	78,000 — 63.2	81,000 — 8.0	187,000 + 49.6	90,000 — 19.9	436,000 — 18.7	614,000
Stocks, Aug. 17	2,097,000 — 2.4	3,199,000 + 13.5	734,000 — 6.0	50,000 — 30.6	5,880,000 + 4.9	5,248,000
Ratio Sales to Prod.	300.0%	17.6%	122.2%	132.4%	61.6%	67.9%
GAS OIL—Gallons						
Stocks, Aug. 10	7,264,000	39,109,000	4,120,000	6,263,000	56,756,000	53,805,000
Prod. 8-10 to 8-17	1,617,000 + 29.8	2,149,000 — 35.0	1,535,000 — 5.6	2,442,000 + 13.1	7,743,000 — 7.1	7,987,000
Ship. 8-10 to 8-17	2,272,000 + 34.6	1,141,000 — 52.9	1,629,000 + 20.3	2,116,000 + 14.9	7,158,000 — 2.1	8,955,000
Stocks, Aug. 17	6,609,000 — 9.0	40,117,000 + 2.6	4,026,000 — 2.3	6,589,000 + 5.2	57,341,000 + 1.0	52,837,000
Ratio Sales to Prod.	140.5%	53.1%	106.1%	86.7%	92.4%	112.1%
FUEL OIL—Gallons						
Stocks, Aug. 10	20,820,000	54,030,000	63,977,000	18,847,000	157,674,000	144,193,000
Prod. 8-10 to 8-17	7,592,000 + 10.2	10,209,000 + 14.1	12,779,000 + 15.6	9,223,000 + 5.1	39,803,000 + 11.6	39,673,000
Ship. 8-10 to 8-17	6,592,000 — 7.8	6,807,000 — 16.1	11,229,000 + 6.3	9,685,000 + 27.5	34,313,000 + 2.7	31,802,000
Stocks, Aug. 17	21,820,000 + 4.8	57,432,000 + 6.3	65,527,000 + 2.4	18,385,000 — 2.5	163,164,000 + 3.5	152,064,000
Ratio Sales to Prod.	86.6%	66.7%	87.9%	105.0%	86.2%	80.2%

Gasoline Produced by Various Methods, Week Ended August 17

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	7,614,000	68.1	13,275,000	65.9	8,034,000	79.8	2,702,000	49.9	31,625,000	67.6
Cracked	2,931,000	26.2	5,778,000	28.7	1,703,000	16.9	2,100,000	38.7	12,512,000	26.7
Natural	640,000	5.7	1,087,000	5.4	329,000	3.3	618,000	11.4	2,674,000	5.7
Total	11,185,000		20,140,000		10,066,000		5,420,000		46,811,000	

+ or — columns are % change from previous week.

Mid-Continent Crude Runs Are at Record Height

Staff Special—By Telegraph
TULSA, Aug. 21

CONTINUATION of the record breaking demand for gasoline and heavy late summer demand for kerosene forced refiners in the Mid-Continent to increase their runs of crude to stills to a new high level the week ended Aug. 17.

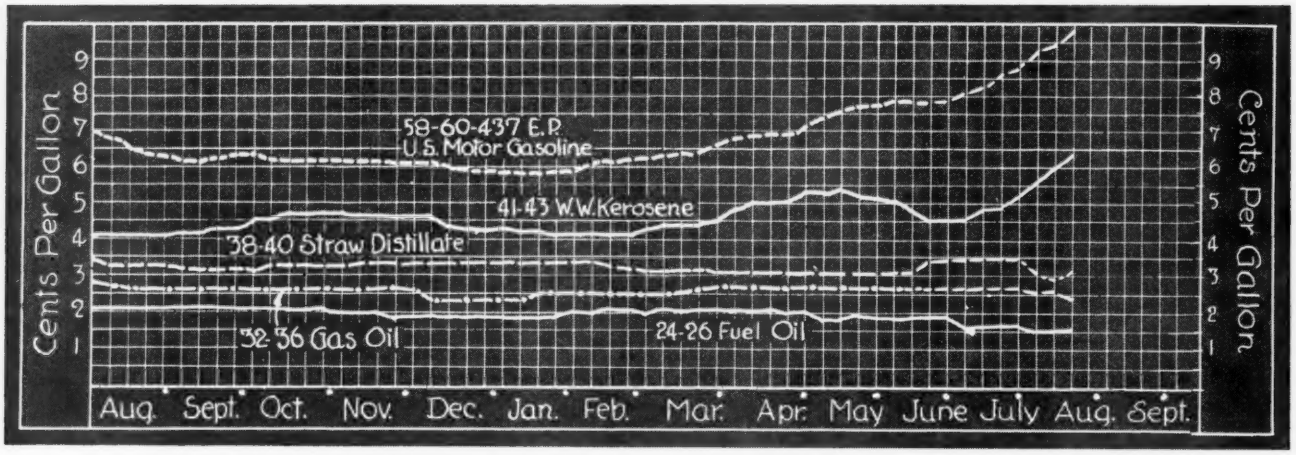
Eighty-one plants in the Mid-Continent representing about 60 per cent of the operating capacity of the field, advanced their crude runs 30,000 barrels daily average to 354,736 barrels a day. This is 2000 barrels daily average above the previous high record made in the week ended July 20 when gasoline shipments from the 81 plants jumped above 50,000,000 gallons for the first time. A year ago in the week ended Aug. 19 virtually the same group of plants were running an average of 294,000 bar-

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Aug. 17. Change in stocks figured from July 20.

	Gallons
GASOLINE	
Production	178,029,000
Shipments	193,893,000
Net change in stocks	—15,864,000
Ratio sales to production	108.9%
KEROSENE	
Production	26,448,000
Shipments	27,660,000
Net change in stocks	—1,212,006
Ratio sales to production	104.6%
STOVE DISTILLATE	
Production	3,259,000
Shipments	2,627,000
Net change in stocks	+632,000
Ratio sales to production	80.6%
GAS OIL	
Production	36,818,000
Shipments	32,314,000
Net change in stocks	+4,504,000
Ratio sales to production	87.8%
FUEL OIL	
Production	150,136,000
Shipments	139,036,000
Net change in stocks	+11,100,000
Ratio sales to production	92.6%

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
Cents Per Gallon
58-60-437 E.P.
U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

rels of crude a day 60,000 barrels less than at present.

Kansas refiners increased their crude runs 10,000 barrels daily average to 74,164 barrels a day. The Oklahoma group pushed its runs up 9000 barrels daily average to 127,481 barrels a day and the Texas group advanced runs 7000 barrels daily average to 90,209 barrels a day. In Arkansas and north Louisiana the advance in crude runs was 4000 barrels to an average of 62,882 barrels a day, a figure well in excess of the rated normal capacity of reporting plants. This is partly due to the fact that some Arkansas cracking plants charge crude direct to pressure stills.

As a result of the higher crude runs refiners were able to almost keep pace with current demand for gasoline. Stocks were reduced 223,000 gallons at all plants. There were minor stock increases in Kansas and Texas with minor reduction in other areas. During the remainder of the heavy gasoline season refiners will find it necessary to keep their current production of gasoline up virtually to the level of demand. Stocks at all reporting plants totaled only 46,770,000 gallons on August 17. This represents less than one week's supply at the current rate of demand and on that basis is the lowest point to which gasoline stocks have been reduced in this area. In September 1926 stocks were cut to about 40,000,000 gallons at virtually the same group of plants but at that time weekly shipments were totaling less than 40,000,000 gallons. Most of the plants in the Mid-Continent now are shipping their gasoline as fast as it is finished only a few of the plants have any large reserve against accidents which might cause a shut down.

Kerosene shipments were lower, falling approximately 500,000 gallons or 6.5 per cent to 6,761,000 gallons. Production was increased 2.5 per cent as a result of the higher rate of operations to 6,809,000 gallons. Stocks at the end of the week were 13,314,000 gallons, increasing only 48,000 gallons at all reporting plants. In the last four weeks kerosene stocks have been reduced 1,212,000 gallons.

Refiners still are exhibiting little interest in stove distillate. Production for the past week was only 708,000 gallons as compared with a production a year ago of 1,681,000 gallons. Throughout the summer refiners have neglected to build up their stocks so that the current total is only 5,880,000 gallons as compared with 11,891,000 gallons Aug. 18, 1927.

Fuel oil stocks continued to climb during the week as production jumped 4,000,000 gallons while shipments increased only 1,000,000 gallons. Stocks at the end of the week were 163,164,000 gallons, an increase of 5,500,000 gallons over Aug. 10 stocks and an increase of 11,000,000 gallons in the last month.

PETER M. SPEER

General solicitor, Standard Oil Co. of New York, who was elected vice president by the board of directors on June 1

Jackson Pump Co. Buys Tool Companies

LOS ANGELES, Aug. 18.—It became known this week that Byron Jackson Pump Co., Berkeley, Calif., had purchased the goodwill and entire business of the Wilson & Willard Mfg. Co., Wilson Oil Tool Co., Rotary Disc Bit Co., U. S. Tool Co., Rotary Oil Tool Co. and Petroleum Engineering Co. The purchased concerns have largely specialized in the manufacture and sale of disc bits, although Wilson & Willard built up an international reputation on oil field tongs, Petroleum Engineering Co. holds disc bit patents.

Byron Jackson Pump Co. was organized in 1872 and for years specialized in the manufacture of centrifugal pumps, used at first entirely in the pumping of water. The pumps were improved from time to time and later a pump was made to fit the needs of the pipe lines and also to handle hot oil in refineries.

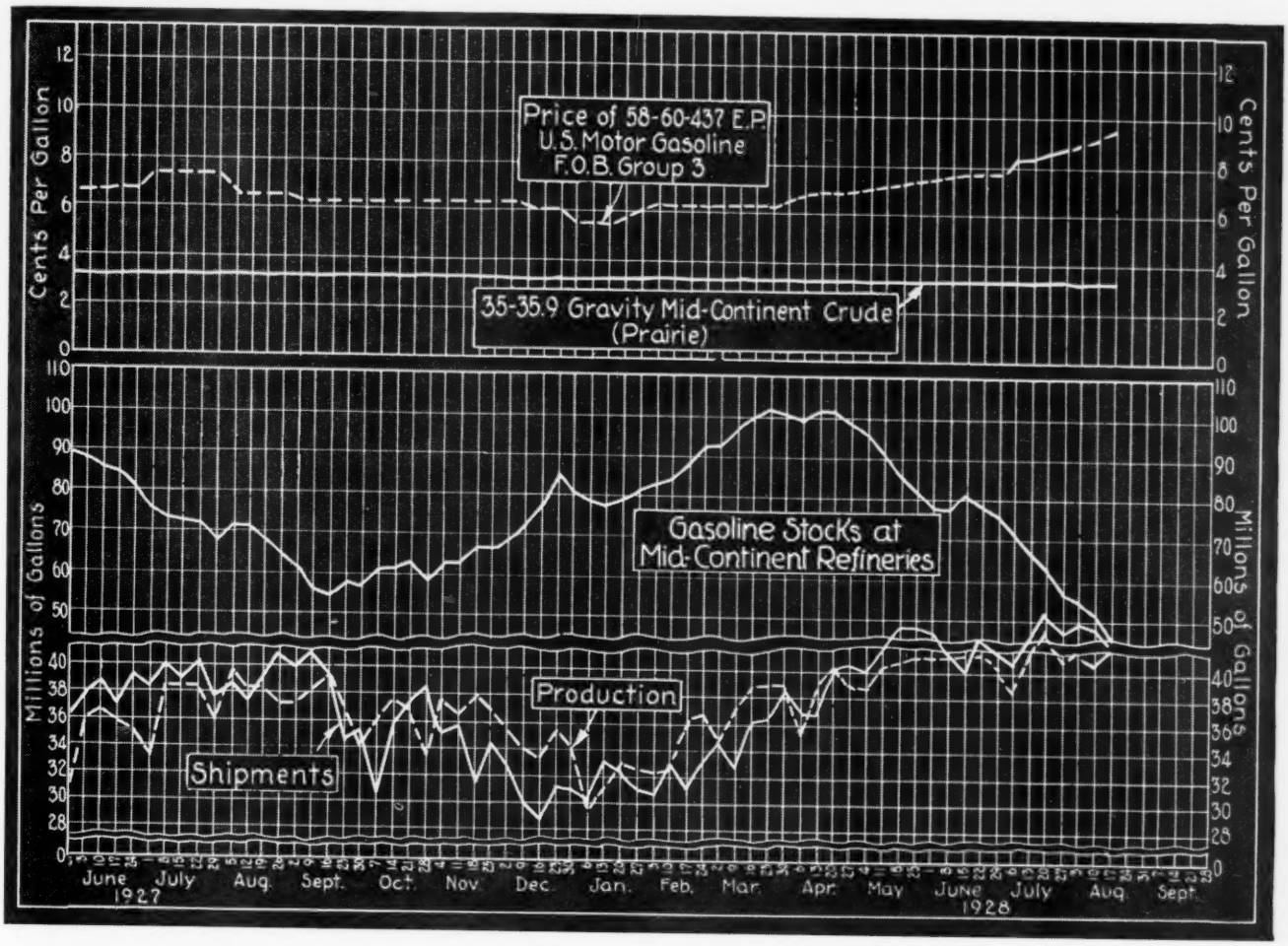
The rotary Disc Bit Co. is a pioneer in the manufacture of the disc bit, the company having started in business in 1912 with W. J. Holland as the founder. In fact, Mr. Holland is known as the father of the disc bit industry and retired from the company he organized some two years ago.

Wilson & Willard Mfg. Co. was organized by the Wilson brothers in 1907 and in 1923 Wilson Oil Tool Co. was formed.

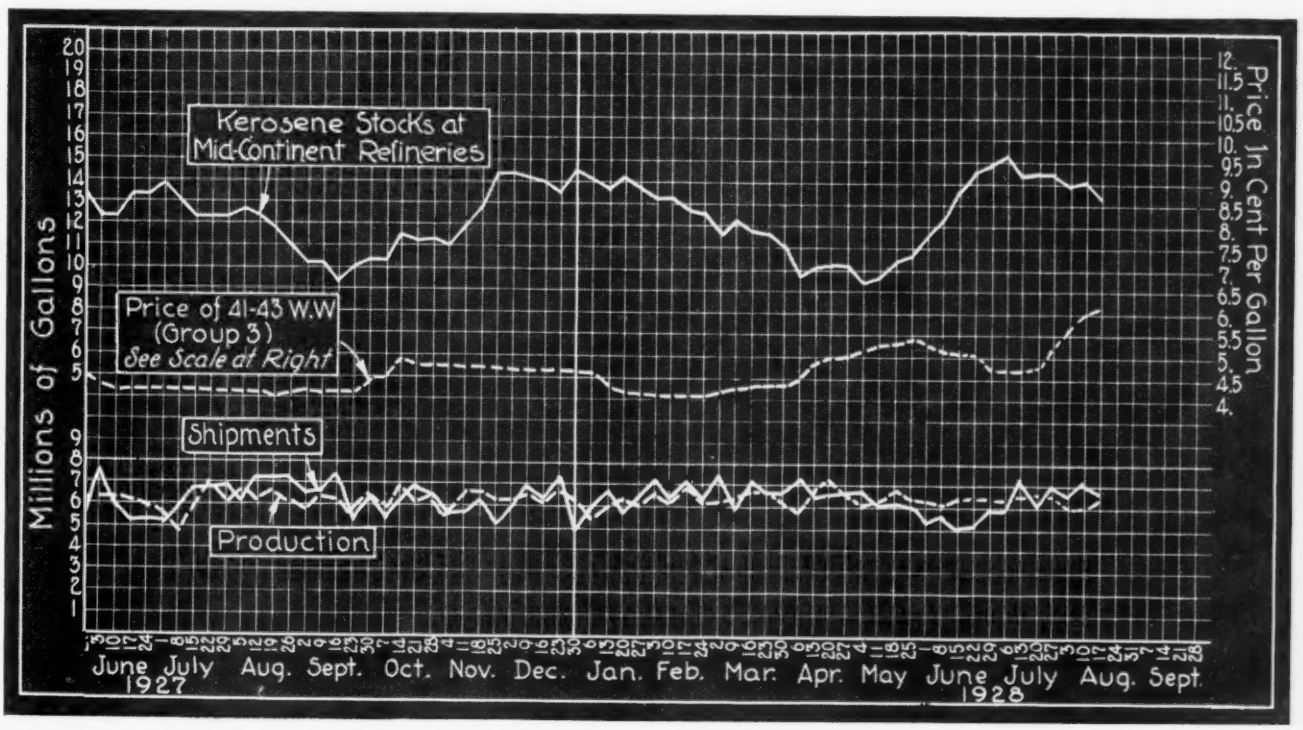
U. S. Tool Co. started business at Long Beach in 1923 and has built up a national business, making disc bits in addition to other oil field specialties. Craig Oil Tool Co. was formed the same year and also made disc bits in addition to other specialties. Petroleum Engineering Co. was formed last year as a holding company for ownership of certain patents.

Barometer of Mid-Continent Refinery Market—Week Ending August 17

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 81 Plants to National Petroleum News

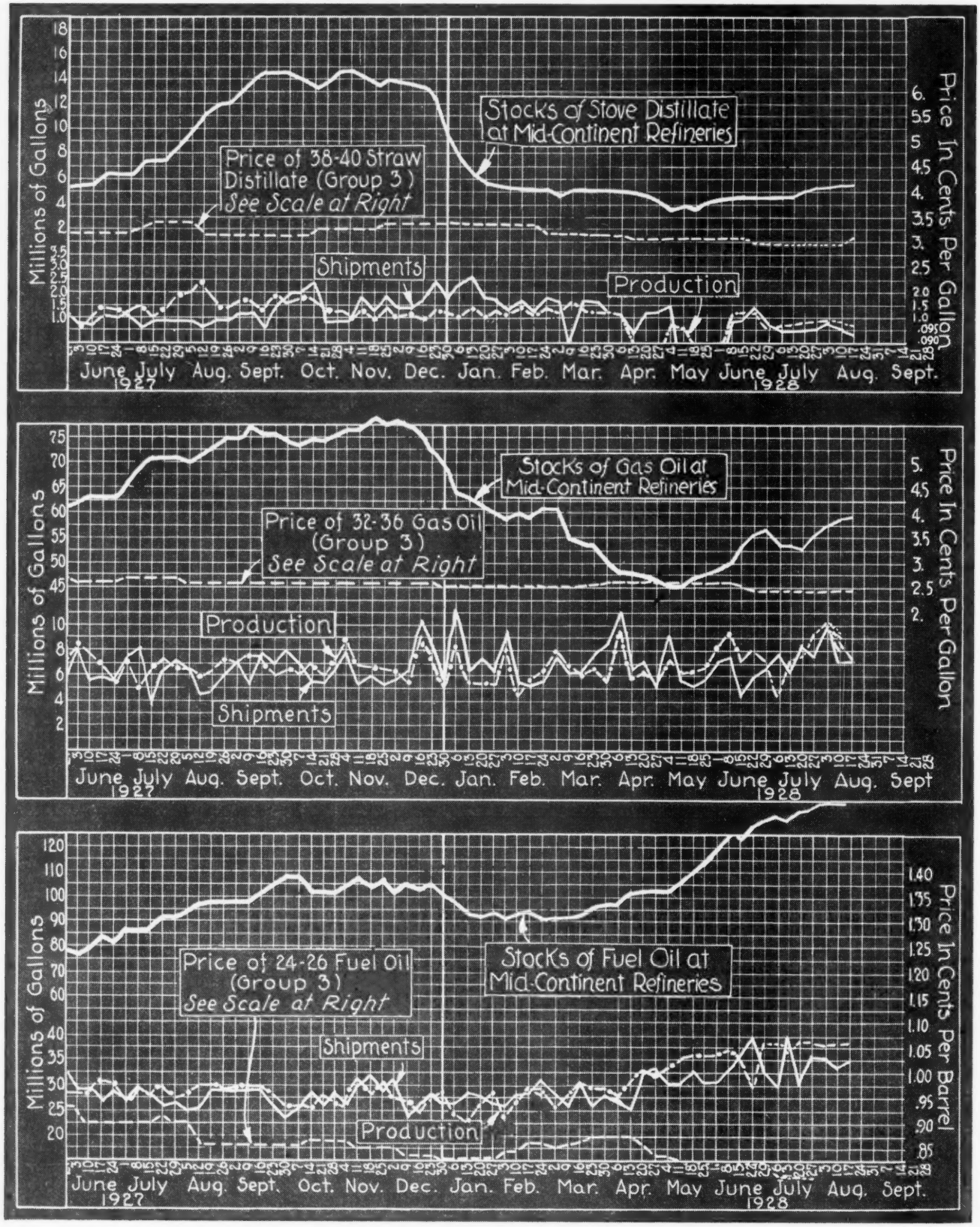

Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Cents Per Gallon
Gasoline Stocks at Mid-Continent Refineries
Production
Shipments
Millions of Gallons
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1927
1928

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in table on opposite page

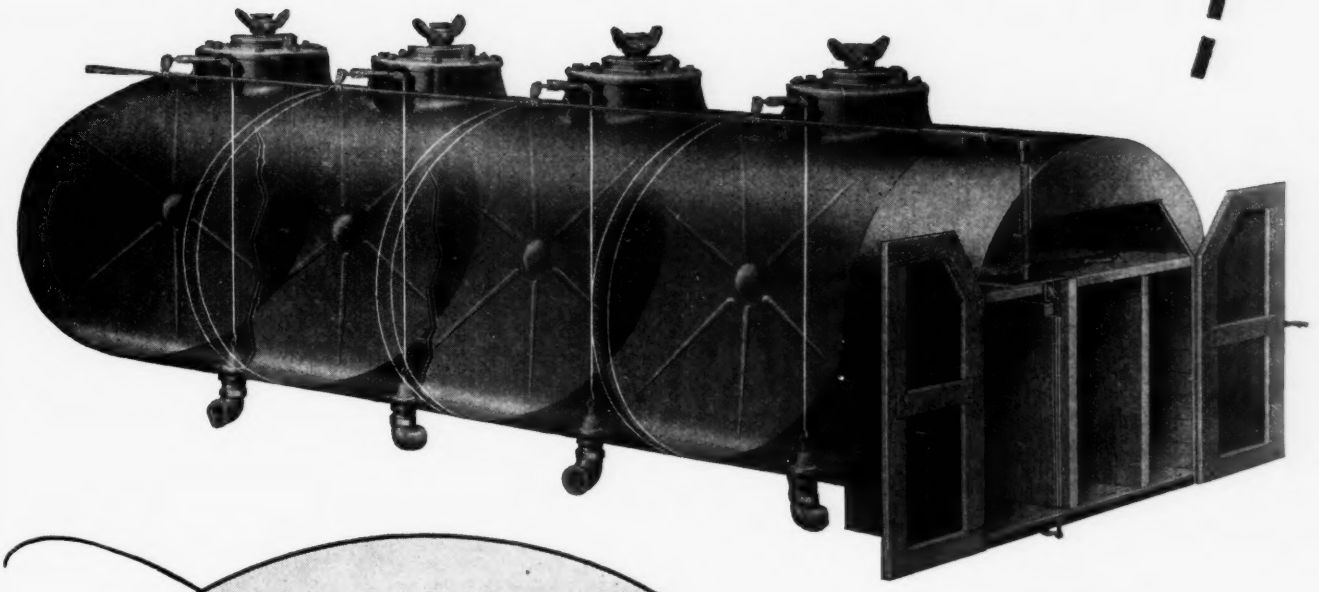

Kerosene Stocks at Mid-Continent Refineries
Price of 41-43 W.W (Group 3) See Scale at Right
Shipments
Production
Millions of Gallons
Price In Cent Per Gallon
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1927
1928

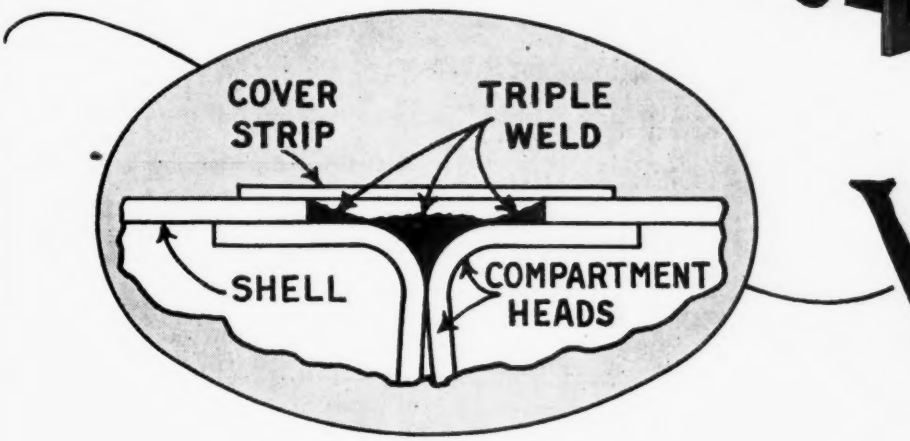
Barometer of Mid-Continent Refinery Market—Week Ending August 17

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, from Reports Made by 81 Plants to National Petroleum News


Millions of Gallons
Price In Cents Per Gallon
Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) See Scale at Right
Shipments
Production
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1927
1928
Millions of Gallons
Price In Cents Per Gallon
Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) See Scale at Right
Production
Shipments
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept
1927
1928
Millions of Gallons
Price In Cents Per Barrel
Price of 24-26 Fuel Oil (Group 3) See Scale at Right
Stocks of Fuel Oil at Mid-Continent Refineries
Shipments
Production
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1927
1928

COMPLETE!





Details of Vogt Welded Compartment Joint

The Vogt Welded Motor Truck Tank

HERE is one of the vital details that has been carefully worked out in Vogt Tanks. The Vogt welded joint is fully described in bulletin M. T. 5 just published. Other new and interesting details are also described. Your copy is waiting.

BRANCH OFFICES:
NEW YORK
CHICAGO
CLEVELAND
DALLAS
PHILADELPHIA

HENRY VOGT MACHINE CO.
INCORPORATED
LOUISVILLE, KY.

Manufacturers of: Oil Refinery Equipment, Drop Forged Steel Valves and Fittings, Water Tube and Horizontal Return Tubular Boilers, Ice Making and Refrigerating Machinery.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for 1927, 1926, 1925, 1924 arranged for quick reference)

These Prices in Effect Aug. 20, 1928, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Atlantic City, N. J.	17	2	19	20	14
Newark, N. J.	17	2	19	20	14
Annapolis, Md.	17	4	21	23	14
Baltimore, Md.	17	4	21	23	12
Cumberland, Md.	17	4	21	23	14
Washington, D. C.	17	2	19	21	14
Danville, Va.	17	5	22	*	14
Norfolk, Va.	14	5	19	20	14
Richmond, Va.	17	5	22	24	14
Roanaoke, Va.	17	5	22	24	14
Petersburg, Va.	17	5	22	24	14
Charleston, W. Va.	17	4	21	23	14
Keyser, W. Va.	17	4	21	23	14
Parkersburg, W. Va.	17	4	21	23	14
Wheeling, W. Va.	17	4	21	23	14
Charlotte, N. C.	17	4	21	23	14
Hickory, N. C.	17	4	21	23	14
Mt. Airy, N. C.	17	4	21	23	14
Salisbury, N. C.	17	4	21	23	14
Charleston, S. C.	17	5	22	24	14
Columbia, S. C.	17	5	22	24	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	18	0	18	*20	15
Albany, N. Y.	18	0	18	21	15
Buffalo, N. Y.	18	0	18	20	15
Rochester, N. Y.	18	0	18	20	13
Syracuse, N. Y.	18	0	18	20	15
Boston, Mass.	18	0	18	20	15
Augusta, Me.	18	4	22	24	15
Manchester, N. H.	18	4	22	24	15
Burlington, Vt.	18	3	21	23	15

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	18	*	18	*23	14
Philadelphia, Pa.	18	*	18	*23	14
Allentown, Pa.	18	*	18	*23	14
Erie, Pa.	18	*	18	*23	14
Scranton, Pa.	18	*	18	*23	14
Altoona, Pa.	18	*	18	*23	14
Dover, Del.	18	3	21	23	14
Wilmington, Del.	18	3	21	23	14
Providence, R. I.	18	2	20	22	15
Boston, Mass.	18	0	18	20	15
Springfield, Mass.	18	0	18	20	15
Worcester, Mass.	18	0	18	20	15
Hartford, Conn.	18	2	20	22	14
New Haven, Conn.	18	2	20	22	15

*3-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Ashland, Ky.	16	5	21	23	15.5
Catlettsburg, Ky.	16	5	21	23	15.5
Lexington, Ky.	15	5	20	22	15.5
Louisville, Ky.	15	5	20	22	14
Covington, Ky.	16	5	21	21	15.5
Clarksdale, Miss.	16	4	21	22	14.5
Gulfport, Miss.	17.5	4	††21.5	23.5	14
Jackson, Miss.	16	4	20	22	14.5
Natchez, Miss.	15.5	4	19.5	21.5	14
Vicksburg, Miss.	15.5	4	19.5	21.5	14
Birmingham, Ala.	18	4	22	24	16
Mobile, Ala.	18	4	22	24	15
Montgomery, Ala.*	19	4	23	25	16.5
Atlanta, Ga.	18	4	22	24	††16.5
Augusta, Ga.	18	4	22	24	††15.5
Macon, Ga.	18	4	22	24	††16.5
Savannah, Ga.	17	4	21	21	14.5
Jacksonville, Fla.	17	5	22	24	13.5
Miami, Fla.	18	5	23	25	15.5
Tampa, Fla.	17	5	22	25	13.5
Pensacola, Fla.	18	5	**23	25	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Chicago, Ill.	15	0	15	17	12
Decatur, Ill.	15.2	0	15.2	17.2	12.1
E. St. Louis, Ill.	14.1	0	14.1	16.35	11.2
Joliet, Ill.	15.4	0	15.4	17.4	12.3
Peoria, Ill.	15.2	0	15.2	17.2	12.1
Quincy, Ill.	15.2	0	15.2	17.2	11.9
Indianapolis, Ind.	15.2	3	18.2	20.2	13.2
Evansville, Ind.	15	3	18	20	13
South Bend, Ind.	15.4	3	18.4	20.4	13.4
Detroit, Mich.	15.8	3	18.8	20.8	13.7
Grand Rapids, Mich.	15.7	3	18.7	20.7	13.6
Saginaw, Mich.	15.9	3	18.9	20.9	13.8
Green Bay, Wis.	15.6	2	17.6	19.6	12.4
Madison, Wis.	15.3	2	17.3	19.3	12.1
Milwaukee, Wis.	15.1	2	17.1	19.1	11.9
La Crosse, Wis.	16.2	2	18.2	20.2	13
Minneapolis, Minn.	16.2	2	18.2	20.2	12.9
Duluth, Minn.	16.5	2	18.5	20.5	12.9
Mankato, Minn.	16.1	2	18.1	20.1	12.7
Des Moines, Ia.	15.5	3	18.5	20.5	12.3
Davenport, Ia.	15.5	3	18.5	20.5	12.3
Sioux City, Ia.	15.1	3	18.1	20.1	11.9
Mason City, Ia.	15.5	3	18.5	20.5	12.3
St. Louis, Mo.	*14.6	2	16.6	18.9	11.3
Kansas City, Mo.	†15.9	2	17.9	19.9	10.6
St. Joseph, Mo.	†15.5	2	17.5	19.5	11.2
Fargo, N. D.	17.9	2	19.9	21.9	14.9
Grand Forks, N. D.	18.2	2	20.2	22.2	15.2
Minot, N. D.	17.9	2	19.9	21.9	14.9
Pierre, S. D.	16.5	4	20.5	22.5	13.9
Huron, S. D.	16.5	4	20.5	22.5	13.9
Wichita, Kans.	13.8	2	15.8	17.8	10.8
Bartlesville, Okla.	13.5	3	16.5	18.5	10.5

S. O. Indiana's quantity discount schedule on tank wagon deliveries of gasoline is ½c for 750 gals. or more a month; 1c for 2,000 gals. or more a month; 1½c for 6,000 gals. or more a month; 2c for 10,000 gals. or more a month, and 3c for 15,000 gals. or more a month.

Service station discount is 2c per gal. to consumers of 200 gals. or more a month. All discounts adjusted annually.

*Includes city tax of ½c.

†Includes city tax of 1c.

CONTINENTAL OIL

Denver, Colo.	16	3	19	22	14.5
Pueblo, Colo.	16	3	19	22	14.5
Grand Junc., Colo.	19.5	3	22.5	25.5	18
Casper, Wyo.	16	3	19	22	13
Cheyenne, Wyo.	17	3	20	23	14.5
Butte, Mont.	20.5	3	23.5	26.5	19
Helena, Mont.	20.5	3	23.5	26.5	19
Salt Lake City, Utah	17.5	3½	21	24	17
Boise, Ida.	19.5	4	23.5	26.5	19
Twin Falls, Ida.	19.5	4	23.5	26.5	19
Albuquerque, N. M.	17	5	22	25	17

S. O. CALIFORNIA

Phoenix, Ariz.	12	4	16	20	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

S. O. LOUISIANA

Little Rock, Ark.	16	2	21	23	13
Alexandria, La.	15	2	17	19	†15
Baton Rouge, La.	14	2	16	18	†13.5
Lake Charles, La.	15.5	2	17.5	19.5	†15
New Orleans, La.	*15.5	2	*17.5	*19.5	†15
Shreveport, La.	15.5	2	17.5	19.5	†14
Lafayette, La.	15	2	17	19	†14.5
Bristol, Tenn.	18	3	21	23	14
Chattanooga, Tenn.	17.5	3	20.5	22.5	15
Knoxville, Tenn.	18	3	21	23	15
Nashville, Tenn.	17	3	20	22	15
Memphis, Tenn.	14	3	17	19	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. OHIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
All Ohio points	15	3	18	19	14

S. O. NEBRASKA

Omaha, Neb.	15.25	2	17.25	19.25	12.25
McCook	16.75	2	18.75	20.75	13.75
Norfolk	15.75	2	17.75	19.75	12.75
North Platte	16.75	2	18.75	20.50	13.50
Scottsbluff	16.75	2	18.75	20.75	13.25

MAGNOLIA PETROLEUM

Muskogee, Okla.	16	3	19	21	11
Oklahoma City	15	3	18	20	11
Tulsa, Okla.	14	3	17	19	11
Fort Smith, Ark.*	14	*3	17	19	12
Little Rock, Ark.	16	5	21	23	12
Texarkana, Ark.*	14.5	*3	17.5	21.5	12
Dallas, Tex.	14	3	17	21	11
Fort Worth, Tex.	14	3	17	20	11
Houston, Tex.	14	3	17	21	15
San Antonio, Tex.	14	3	17	20	10
El Paso, Tex.	15	3	18	21	16

*Within City of Texarkana and Fort Smith, the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In these two districts outside of the city the 5c Arkansas tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.2	18
Detroit	16.4	17.9	19.7
Kansas City	†14.9	†16.4	†18.2
Milwaukee	15.4	*18.9	*20.7
Minneapolis	*18.7	*20.2	*22
St. Louis	14.6	16.1	17.9
New York		20	....

*Includes 2c state tax. †Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Toronto	20.5	3	23.5	27	22
Ottawa	20.5	3	23.5	27	22
Cochrane	25.5	3	28.5	..	27
Ft. William	23.5	3	26.5	30	23.5

MANITOBA

Winnipeg	22.5	3	25.5	29	22.5

SASKATCHEWAN

Regina	27	3	30	34	27

ALBERTA

Edmonton	27.5	3	30.5	34	27.5
Calgary	22.5	3	25.5	29	22.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	22

QUEBEC

Montreal	21.5	5	26.5	30	22
Quebec City	22.5	5	27.5	31	23
Three Rivers	22.5	5	27.5	31	23

NEW BRUNSWICK

St. John	23.5	3	26.5	30	25
Moncton	23.5	3	26.5	30	25

NOVA SCOTIA

Halifax	23.5	5	28.5	32	25
Sydney	23.5	5	28.5	32	25

PRINCE EDWARD ISLAND

Charlottetown	23.5	5	28.5	32	25

Note: In districts surrounding these points 1c additional is added to city price.

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Colorado, 1/10c on both; Florida, 1/8c; Indiana, 2/25c; Kansas, 1/50c; Louisiana, 1/32c on gasoline, 1c on kerosene; Minnesota, 3/50c; Missouri, 1/50c; Nebraska, 3/50 to 1/2c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 4/25c; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c on gasoline and 1/2c on kerosene; Wisconsin, 3/50c.

Kerosene inspection fees only: Iowa, 13/100c; Michigan, 1/5 to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above states or other states there are local inspection fees.

Gasoline Demand is 11.93% More This Year in 36 States

CLEVELAND, Aug. 20

GASOLINE consumption in 36 states and the District of Columbia that have gasoline inspection or tax law, was 11.93 per cent more daily average in the first half of 1928 than in the first half of 1927. Total consumption this year was 12.54 per cent more, the difference in the two percentages being the result of Feb. 29 adding another day of demand this year.

Consumption in California was 9.69 per cent more the first half of this year and in Montana 46.26 per cent more. These two states were not included in the list of 36, because gasoline tax figures in them are available only by quarters and not by months as in the 36 states.

June gallonage in the 36 states and in the district was 9.26 per cent larger than gallonage in June, 1927, although gallonage was less in the District of Columbia and five states—Arkansas, Delaware, Florida, Kansas and North Carolina.

In the six months gallonage was less than in the first half of 1927 in Florida and Iowa.

The largest gain in gallons this year was in California where demand increased approximately 47,000,000 gallons. Ohio was second with an increase of 36,000,000 gallons and Texas third with an increase of 31,000,000 gallons.

The largest percentage of gain was 54.97 per cent in Arizona. Montana was second with 46.26 per cent, and North Dakota third with 42.50 per cent.

Florida's loss in gallonage in the half year was approximately 13,500,000 gallons. Gallonage in Florida in the first half of 1927 was less than in the first half of 1926, which means that the 1928 gallonage was less than that of 1926. Florida is the only state in which gallonage has so declined.

In the accompanying table of gallonages by states the percentage comparisons are of gallonages in the two Junes and in the first halves of 1927 and 1928. The gallonage figures were collected by the American Petroleum Institute from the various states.

Gasoline Consumption by States

(Gallonage Figures from American Petroleum Institute)

	June, 1928 Gallons	June, 1927 Gallons	% Change 1928 from 1927	6 Months Ended With June, 1928 Gallons	6 Months Ended With June, 1927 Gallons	% Change 1928 from 1927	
Alabama	15,019,000	12,298,000	+22.12	78,261,000	65,841,000	+18.86	Alabama
Arizona	4,784,000	3,175,000	+50.68	26,788,000	17,286,000	+54.97	Arizona
Arkansas	8,636,000	8,745,000	— 1.25	52,013,000	43,782,000	+18.80	Arkansas
Colorado	12,956,000	11,338,000	+14.27	68,624,000	58,194,000	+17.92	Colorado
Delaware	2,851,000	3,016,000	— 5.47	12,112,000	10,783,000	+12.32	Delaware
Dist. of Columbia	5,492,000	5,495,000	— 0.05	29,754,000	27,569,000	+ 7.92	Dist.of Columbia
Florida	18,249,000	20,778,000	—12.17	120,690,000	134,261,000	—10.11	Florida
Georgia	17,581,000	15,143,000	+16.10	96,529,000	88,791,000	+ 8.71	Georgia
Idaho	4,870,000	4,194,000	+16.12	20,469,000	16,554,000	+23.65	Idaho
Indiana	34,559,000	31,643,000	+ 9.21	171,921,000	146,119,000	+17.66	Indiana
Iowa	27,120,000	25,363,000	+ 6.93	141,385,000	143,270,000	— 1.31	Iowa
Kansas	27,565,000	28,024,000	— 1.64	137,919,000	118,642,000	+16.24	Kansas
Kentucky	11,661,000	10,831,000	+ 7.66	57,863,000	49,348,000	+17.25	Kentucky
Louisiana	13,069,000	11,751,000	+11.21	77,953,000	70,634,000	+10.36	Louisiana
Maine	9,240,000	8,767,000	+ 5.40	29,115,000	25,369,000	+14.76	Maine
Michigan	66,575,000	58,536,000	+13.73	286,612,000	264,902,000	+ 8.19	Michigan
Minnesota	31,699,000	29,754,000	+ 6.54	143,052,000	124,271,000	+15.11	Minnesota
Missouri	31,142,000	28,054,000	+11.01	164,294,000	148,903,000	+10.33	Missouri
Nebraska	17,340,0000	14,709,000	+17.89	93,526,000	73,874,000	+26.60	Nebraska
Nevada	1,480,000	1,272,000	+16.35	6,343,000	5,428,000	+16.86	Nevada
New Hampshire	5,038,000	4,818,000	+ 4.56	17,781,000	16,718,000	+ 6.36	New Hampshire
New Mexico	3,287,000	2,763,000	+18.96	16,591,000	13,555,000	+22.40	New Mexico
North Carolina	19,830,000	20,302,000	— 2.32	113,742,000	98,229,000	+15.79	North Carolina
North Dakota	8,936,000	8,884,000	+ 0.59	47,156,000	33,093,000	+42.50	North Dakota
Ohio	75,597,000	69,232,000	+ 9.19	384,992,000	348,251,000	+10.55	Ohio
Oklahoma	25,008,000	23,078,000	+ 8.36	127,387,000	115,021,000	+10.75	Oklahoma
Oregon	13,598,000	12,375,000	+ 9.88	63,133,000	56,692,000	+11.36	Oregon
Rhode Island	6,125,000	5,218,000	+17.38	29,504,000	27,467,000	+ 7.42	Rhode Island
South Carolina	9,632,000	8,320,000	+15.77	52,169,000	45,259,000	+15.27	South Carolina
South Dakota	10,233,000	8,895,000	+15.04	49,725,000	37,466,000	+32.72	South Dakota
Tennessee	14,866,000	13,161,000	+12.95	75,644,000	65,527,000	+15.44	Tennessee
Texas	57,159,000	50,100,000	+14.09	309,472,000	269,554,000	+14.81	Texas
Utah	4,766,000	4,112,000	+15.90	22,173,000	18,232,000	+21.62	Utah
Virginia	16,568,000	15,070,000	+ 9.94	82,129,000	73,173,000	+12.24	Virginia
Washington	21,087,000	19,045,000	+10.72	102,631,000	91,666,000	+11.96	Washington
Wisconsin	35,488,000	32,615,000	+ 8.81	149,064,000	130,919,000	+13.86	Wisconsin
Wyoming	3,228,000	2,771,000	+16.49	13,790,000	10,604,000	+30.04	Wyoming
Total	692,334,000	633,645,000	+ 9.26	3,472,306,000	3,085,247,000	+12.54	Total
Daily Average	23,078,000	21,121,000	+ 9.26	19,079,000	17,046,000	+11.93	Daily Average
Increase over previous year:	58,689,000	.....		387,059,000	.....		Increase over previous year
Connecticut	.....	.....		.....	.....		Connecticut
Mississippi	.....	.....		.....	.....		Mississippi
Vermont	.....	.....		.....	.....		Vermont
New Jersey	37,582,000	.....		.....	.....		New Jersey

	Quarter Ended June 30, 1928	Quarter Ended June 30, 1927		6 Months Ended With June 30, 1928	6 Months Ended With June 30, 1927		
California	285,431,000	270,333,000	+ 5.58	536,537,000	489,149,000	+ 9.69	California
Montana	20,615,000	12,609,000	+63.49	29,882,000	20,431,000	+46.26	Montana

Crude Oil Prices (in Effect Aug. 20)

(Crude prices for years 1924-1925-1926-1927 in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$3.20
Bradford District Oil in National Transit Lines (Bradford District)	3.20
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.10
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.10
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.00
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.85
Keister Grade in National Transit Lines (Butler Co.)	1.20
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.45
Corning Grade in Buckeye Pipe Lines (Ohio)	1.80
Corning, O., heavy grade	1.70
Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.70
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.55

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective July 27, 1928

Wooster	$1.67	Princeton	$1.55
Lima	1.60	Illinois	1.55
Waterloo	1.20	Plymouth	1.28
Indiana	1.37	West Kentucky	1.48

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$2.00
Oil Springs	2.07

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective July 26, 1928

Below 25	$0.60	35-35.9	$1.31
25-25.9	0.67	36-36.9	1.36
26-26.9	0.74	37-37.9	1.41
27-27.9	0.81	38-38.9	1.46
28-28.9	0.88	39-39.9	1.51
29-29.9	0.95	40-40.9	1.56
30-30.9	1.02	41-41.9	1.61
31-31.9	1.09	42-42.9	1.66
32-32.9	1.16	43-43.9	1.71
33-33.9	1.21	44 and above	1.76
34-34.9	1.26		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Effective July 26, 1928

Below 25	$0.60	26-26.9	$0.74
25-25.9	0.67	27-27.9	0.81

Rest of schedule same as Prairie's.

Mirando, Tex	$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

July 26, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades, unchanged from Feb. 16:

Below 25	$0.60	26-26.9	0.74
25-25.9	0.67	27-29.9	0.75
30-30.9			0.90
31-31.9			1.05
Glasscock, Crane, Upton, Winkler Counties			0.65
Chalkfield (Howard Co.)			0.80
Iatan district			0.93
Corsicana heavy			1.00

Carter Oil Co.

(Oklahoma and Kansas)

July 26, same schedule as Prairie plus these grades:

25-25.9	$0.67	27-27.9	$0.81
26-26.9	0.74		

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective July 26, 1928

Hutchinson and Carson Counties:

Below 32	$0.69	38-38.9	$1.06
32-32.9	0.76	39-39.9	1.11
33-33.9	0.81	40-40.9	1.16
34-34.9	0.86	41-41.9	1.21
35-35.9	0.91	42-42.9	1.26
36-36.9	0.96	43-43.9	1.31
37-37.9	1.01	44 and above	1.36

Wheeler County:

Below 30	$0.65	37-37.9	$1.11
30-30.9	0.72	38-38.9	1.16
31-31.9	0.79	39-39.9	1.21
32-32.9	0.86	40-40.9	1.26
33-33.9	0.91	41-41.9	1.31
34-34.9	0.96	42-42.9	1.36
35-35.9	1.01	43-43.9	1.41
36-36.9	1.06	44 and above	1.46

Gray County:

Below 29	$0.68	37-37.9	1.21
29-29.9	0.75	38-38.9	1.26
30-30.9	0.82	39-39.9	1.31
31-31.9	0.89	40-40.9	1.36
32-32.9	0.96	41-41.9	1.41
33-33.9	1.01	42-42.9	1.46
34-34.9	1.06	43-43.9	1.51
35-35.9	1.11	44 and above	1.56
36-36.9	$1.16		

WEST TEXAS

Humble Oil & Refining Co.

Effective July 26, 1928

Winkler, Crane, Upton, Crockett, and Pecos Counties	$0.65

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto and **Cotton Valley.

Effective July 26, 1928

Below 28	$0.81	36-36.9	$1.36
28-28.9	0.88	37-37.9	1.41
29-29.9	0.95	38-38.9	1.46
30-30.9	1.02	39-39.9	1.51
31-31.9	1.09	40-40.9	1.56
32-32.9	1.16	41-41.9	1.61
33-33.9	1.21	42-42.9	1.66
34-34.9	1.26	43-43.9	1.71
35-35.9	1.31	44 and above	1.76

**Cotton Valley, below 36, $0.75. Beginning with 36-36.9, same schedule as above.

Smackover, below 24	$0.75
do 24 and above	.90
Bellevue	1.25
*Urania, La	.85
†East El Dorado	0.75

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

Smackover prices posted on Feb. 7 by S. O. La. Gulf, Shreveport-El Dorado Pipe Line, Atlantic Oil Producing Co. and The Texas Co.; on Feb. 8 by Magnolia; on Feb. 6 by La. Oil Refg. Corp.

Aug. 8 The Texas Co., same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.60; 25-25.9, $0.67; 26-26.9, $0.74; 27-27.9, $0.81.

Aug. 7 Magnolia Petroleum met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective Aug. 2, 1928

Below 28	$0.75	30-30.9	$0.87
28-28.9	0.79	31-31.9	0.91
29-29.9	0.84	32 and above	0.95

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14, 1927

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

Week's Price Changes Tank Wagon Markets

Gasoline Changes

Atlantic Refining—T.w. and s.s. prices gasoline advanced 1 cent, Pennsylvania and Delaware, **Aug. 16.** T.w. price is generally 18 cents exclusive of state taxes.

Continental Oil—T.w. and s.s. prices gasoline advanced 1 cent. Albuquerque, to 22 cents and 25 cents respectively, including 5 cent state tax, **Aug. 20.**

* * *

Kerosene Changes

Standard of Louisiana—Kerosene prices advanced 1 cent, Louisiana and Arkansas, **Aug. 13.**

Pacific Coast Shipments

LOS ANGELES, Aug. 18.—Petroleum shipments leaving Los Angeles Harbor for points outside Pacific Coast trade territory during July reached a total of 5,870,133 barrels of petroleum products, or a daily average of 189,359 barrels.

Total movement included 606,166 barrels of crude, 1,742,077 of fuel, 2,557,659 of gasoline, 403,329 of kerosene, 461,602 of Diesel, 4895 of lub oil and 94,405 of tops.

Products going to Pacific foreign included 419,139 barrels of crude, 1,348,688 of fuel, 276,923 of gasoline, 403,329 of kerosene, 113,304 of Diesel and 4895 of lub oil.

Atlantic domestic trade absorbed 187,027 barrels of crude, 1,658,925 of gasoline and 288,361 of Diesel. Remainder of movement went to Atlantic foreign.

Crude Price Changes

SHREVEPORT—On Aug. 13 Magnolia Petroleum Co. posted all grades of East El Dorado crude at 75 cents. This does not include Rainbow City crude.

* * *

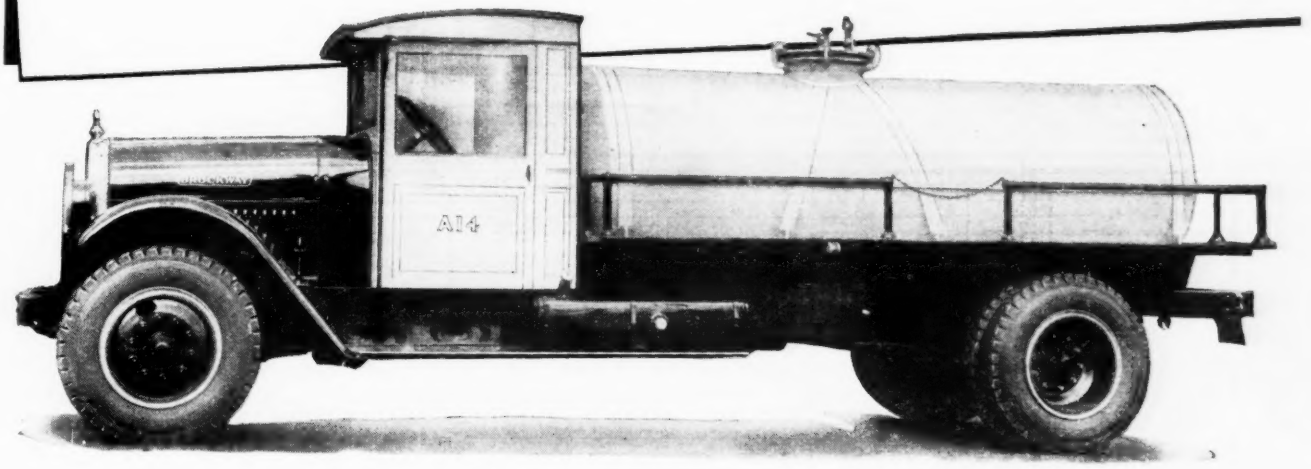
SAN FRANCISCO—On Aug. 15 Standard Oil Co. of California advanced crude in all California fields in amounts ranging from 1 to 59 cents. The advance for the average grade is about 15 cents per barrel. New prices are published on page 106 in the crude price table.

Sam G. Baggett, formerly secretary of the oil managers association at Tampico, is now assistant general counsel of the United Fruit Co., at Boston.

WE HAVE DEFINITELY DECIDED TO STANDARDIZE ON BUDD DUALS FOR OUR 3-TON MODEL . . . AND ON ALL OTHER MODELS USING DUAL WHEELS, AS SOON AS OUR PRESENT COMMITMENTS ON MATERIAL RUN OUT.

W. B. Eddy.

Brockway Motor Truck Corp.



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other duals

BUDD DUALS

Can't wobble—

Can't shimmy—

And they stop side-sway!

BUDD WHEEL COMPANY, DETROIT

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Crude Oil Prices (in Effect Aug. 20)

(Crude prices for years 1924-1925-1926-1927 in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective March 14, 1927

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective July 26, 1928)

‡Salt Creek 29-29.9	$0.95
" " 30-30.9	1.02
" " 31-31.9	1.09
" " 32-32.9	1.16
" " 33-33.9	1.21
" " 34-34.9	1.26
" " 35-35.9	1.31
" " 36-36.9	1.36
" " 37 and above	1.41
Elk Basin	1.48
Grass Creek light	1.48
Big Muddy	1.33
Lance Creek	1.48
Rock Creek	1.33
Mule Creek	1.10
Rex Lake	1.10
‡Osage	1.48
‡Cat Creek, Mont.	1.48
Sunburst, Mont.	1.65
‡Hogback, N. Mex.	1.48
Artesia, N. Mex.	1.08

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

Standard Oil Co. of California

Santa Maria and Ventura Posted by Union Oil Co.

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach	Inglewood Torrance	Ollinda-Brea Canon Richfield	Athens-Rosecrans Dominguez	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebelle	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85	$ .85
15-15.9	.85	.85	.85	....	.85	.85	....	.75	.75	.75	.75	.75	.85	.85	.85
16-16.9	.85	.85	.85	....	.85	.85	....	.75	.75	.75	.75	.75	.85	.85	.85
17-17.9	.85	.85	.85	....	.85	.85	....	.75	.75	.75	.75	.75	.85	.85	.85
18-18.9	.85	.85	.85	....	.85	.85	....	.75	.75	.75	.75	.75	.85	.85	.85
19-19.9	.85	.85	.85	....	.85	.85	....	.75	.75	.75	.75	.75	.85	.85	.85
20-20.9	.85	.85	.85	....	.85	.85	....	....	.77	.77	.77	.77	.86	.85	.85
21-21.9	.89	.89	.89	....	.88	.88	.89	....	.79	.79	.79	.79	.89	.86	.86
22-22.9	.93	.93	.93	....	.91	.91	.92	....	.82	.82	.82	.82	.92	.87	.87
23-23.9	.97	.97	.97	....	....	.94	.95	....	.86	.86	.85	.85	.95	.90	.90
24-24.9	1.01	1.01	1.01	1.01	....	.97	.98	....	.90	.90	.88	.88	.98	.93	.94
25-25.9	1.05	1.05	1.05	1.05	....	1.00	1.01	....	.95	.95	.91	.91	1.01	.95	.98
26-26.9	1.09	1.09	1.09	1.09	....	1.04	1.04	....	1.00	1.00	.94	.94	1.04	.97	1.02
27-27.9	1.13	1.13	1.13	1.13	....	1.08	1.07	....	1.05	1.05	.98	.97	1.07	....	1.06
28-28.9	1.17	1.17	1.17	1.17	....	1.12	1.10	....	1.10	1.10	1.02	....	1.10	....	1.10
29-29.9	1.21	....	1.21	1.21	....	1.16	1.15	....	1.16	1.16	1.06	....	1.13	.....	1.14
30-30.9	1.25	....	1.25	1.25	....	1.20	1.20	....	1.22	1.22	1.10	....	1.16	....	1.18
31-31.9	1.30	....	....	1.30	....	....	1.25	....	1.28	1.28	1.14	....	....	....	1.23
32-32.9	1.35	....	....	1.35	....	.....	1.30	....	1.34	1.34	1.18	....	....	....	1.28
33-33.9	....	....	....	1.41	....	.....	1.35	....	1.40	1.40	1.22	....	....	....	....
34-34.9	....	....	.....	1.47	....	.....	1.40	....	....	1.46	1.26	....	....	....	....
35-35.9	....	....	....	1.53	....	....	1.45	....	....	....	1.30	....	....	....	....
36-36.9	....	....	....	1.59	....	....	1.50	....	....	....	....	....	....	....	....
37-37.9	....	....	....	1.65	....	....	1.55	....	....	....	....	....	....	....	....
38-38.9	....	....	....	1.71	....	....	1.60	....	....	....	....	....	....	....	....
39-39.9	....	....	....	1.77	....	....	1.65	....	....	....	....	....	....	....	....
40-40.9	....	....	....	1.83	....	....	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	1.89	....	....	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	1.95	....	....	....	....	....	....	....	....	....	....	....

*Union Oil Co. posts same prices in all above fields as Standard except in Montebello and Wheeler Ridge. It also posts Elwood Terrace at same prices as Rosecrans—Dominguez and also posts Santa Maria (Orcutt) and Ventura.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders as effective the date shown.

	Aug. 20	Aug. 13
Refiners' Supplies		
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.65	$1.65
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums, cwt.	$0.70-0.75	$0.70-0.75
Sal Soda wks.	$0.90	$0.90
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks, lb.	3.50-5.00	3.50-5.00
Litharge, powdered, casks, cwt.	8.75	8.75
Compounders' Supplies		
Vegetable Oils		
Linseed carloads, spot, lb.	9.70	9.50
Tanks, spot	8.90	8.70
Soya Bean, Tanks, coast, lb.	9.50-9.75	9.50-9.75
Oleic Acid		
Distilled, tanks, lb.	9.00	9.00
Distilled, bbls, lb.	9.75	9.75
Saponified, tanks, lb.	9.25	9.25
Saponified, bbls, lb.	10.00	10.00
Lard Oils		
Prime Winter Strained, lb.	15.75	16.25
Extra Winter Strained, lb.	13.00	13.00
Extra, lb.	12.50	12.50
Extra No. 1, lb.	12.25	12.25
No. 1, lb.	11.50	11.50
No. 2, lb.	11.125	10.75
Tallow oil, lb.	11.375	11.375
Neatsfoot Oil		
Pure, bbls, lb.	15.25	15.25
Extra, bbls, lb.	12.50	12.50
No. 1 bbls, lb.	11.75	11.75
Cold Pressed, lb.	18.50	18.50
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	60-61	60-61
Light Pressed, tank cars, N. Y., gal.	54-56	54-56
White bleached, gal.	65-66	65
Yellow bleached, gal.	66-68	66-68
Whale, extra winter bleached, gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y., gal.	52	52
Steam distilled turpentine, Savannah, gal.	47	47
Gum turpentine, N. Y., gal.	54.50	54.50
Gum turpentine, f.o.b. cars Savannah, gal.	47.75	47.75
Wood Rosin F, N. Y., bbl.	$8.30	$8.30
Wood Rosin F, Savn'h., bbl.	$7.50	$7.50
Gum Rosin B, N. Y., bbl.	$8.90	$8.90
Gum Rosin B, f.o.b. cars Savannah, bbl.	$8.15	$8.15
Rosin oil, pure, gal.	57	57
Rosin oil, compounded, gal.	47	47
Pine Tar		
Kiln burnt, bbl.	$12.50-14.00	$12.50-14.00
Retort, bbl.	$13.50-15.50	$13.50-15.50
Alcohol		
Denatured, Formula 5, in bbls., per gal.	53-60	53-58

*Nominal.

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—for the NEW FORD

— an entirely new design — built for a specific purpose — ***not a revamped or converted tank.*** • • • • •

Low overall height—low center of gravity —less side sway—highly attractive and complete in every detail. • • •

Welded "flexible-unit" oval tanks—steel "cushioned" underframe—strong bumper and safety bar—roomy, steel bucket box —safety controls and vents. Mounting assure a rigidity which means extra long life.

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Greatest strength is combined with lightweight—***you don't sacrifice gallonage for bulky, excessive, weighty construction.***

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That impression of efficiency

When motorists drive up to your filling station are they served by neat appearing attendants?

Add to your service that one touch that makes it complete. Have your men uniformed — "Well dressed for work."

Standard Work Garments are made of the finest materials — triple stitched and reinforced — made to look right and wear right.

Standard Work Garments

$3.25 each

15% off in dozen lots. Special Prices in larger quantities.

Choice of blue denim, white, hickory stripe, express stripe, fancy blue and gold stripe. Union Made. Name or trade-mark embroidered in fast colors for 25c per garment.

The Standard Garment Co.

Toledo, Ohio

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Magnolia Pipe Line Runs

HOUSTON, Aug. 16.—Magnolia Petroleum Co., pipeline department, announces from Dallas headquarters the following crude oil runs for July, which are shown in comparison with June:

	June	July
Hewitt-Graham	185,201.73	173,124.27
Healdton	234,904.35	242,132.69
Cushing	122,211.40	128,159.04
Yale	50,907.14	51,527.65
Duncan	42,697.23	43,935.04
Augusta	37,471.80	38,258.29
Walters-Beaver Creek	6,333.04	8,700.92
Burbank	84.65	89.13
Wewoka	763,096.45	945,586.40
Seminole	170,823.21	155,820.33
Cement	.....	16,358.99
Total Okla.-Kans.	1,613,731.00	1,803,692.75
Archer	29,707.94	29,188.18
Burkburnett	72,995.42	70,277.12
Comanche	20,087.39	19,549.68
Electra	100,264.62	101,193.73
Corsicana Heavy	9,294.27	9,100.49
Corsicana Light	13,518.68	13,034.12
Henrietta	2,831.62	3,150.45
Howard County	28,144.82	28,023.47
Luling	349,031.78	353,509.86
Lytton Springs	53,072.66	53,808.04
Mexia-Wortham	28,033.69	27,298.46
Mirando	81,673.78	117,110.95
Olden	9,716.24	10,301.72
Panhandle	113,209.85	112,361.65
Panola	1,169.81	1,194.43
Stephens	7,245.82	8,233.82
Thrall	1,075.57	995.05
Gulf Coast	1,284.39	854.60
Crane-Upton	265,524.11	402,317.79
Glasscock	8,747.70	.....
Winkler	.....	37,967.95
Total Texas	1,196,630.16	1,399,471.56
Haynesville	2,187.80	2,924.34
Bull Bayou	44,013.85	42,544.32
Cotton Valley	25,531.21	25,570.99
Pine Island	32,629.25	32,670.47
Hackberry	8,650.14	17,925.84
Total Louisiana	113,012.25	121,635.96
El Dorado Light	82,624.07	62,548.42
East El Dorado	5,731.92	4,142.76
Smackover	82,186.06	103,225.59
Total Arkansas	170,542.05	169,916.77
GRAND TOTAL	3,093,915.46	3,494,717.04

OKLAHOMA-KANSAS

Report for July		Daily Average
Runs	2,176,105	70,197
Shipments	2,070,569	66,793
TOTAL STOCK	8,658,532	.....

TEXAS

Wichita, Wilbarger, Archer	Runs	201,168	6,487
	Shipments	214,291	6,913
Petrolia	Runs	2,056	66
	Shipments	2,056	66
Eastland, Stephens	Runs	38,085	1,229
	Shipments	.....	.....

TOTAL STOCK 378,043.00 North Central Texas Field.

Tanker Rates

NEW YORK, Aug. 20.—Approximate tanker freight rates in the following trades are, to Continental ports, in shillings per ton of 2240 pounds, British Sterling; to American ports, cents per barrels:

	Crude &/or Fuel	Refined Oil
Calif. to U.K. or Continental ports*	25/6	26/-
Gulf to U.K. or Continental Ports*	15/	15/6
North Atlantic to U.K. or Continental ports*	12/	12/6
Calif. to North Atlantic ports (not E. of N. Y.)	50c	68-70c
**Gulf and North Atlantic ports (not E. of N.Y.)	16-17c	25-27c

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.

**For Venezuela loading 1c per bbl. additional. For Tampico loading, 4c per bbl. additional.

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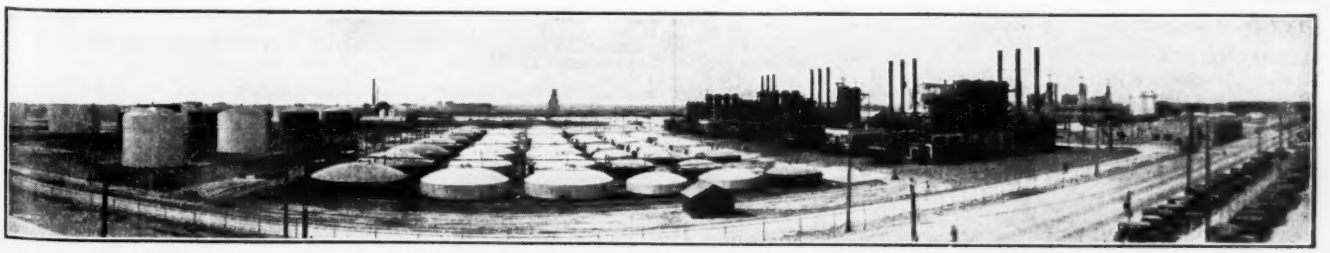
The Shell Refinery at East Chicago, Indiana



Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the years 1924-1925-1926-1927)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, represent majority of quotations and sales.)

	Aug. 20	Aug. 13	Aug. 6
U.S. Motor gasoline, New York harbor	11.75	11.75	11.25
U.S. Motor gasoline, Philadelphia	11.50 –12.00	11.50 –11.75	11.25
U.S. Motor gasoline, Boston district	*12.25	*12.25	*11.75
U.S. Motor gasoline, Providence district	*12.25	*12.25	*11.75
U.S. Motor gasoline, Baltimore	11.75	11.75	11.25
U.S. Motor gasoline, Norfolk	11.75	11.75	11.25
U.S. Motor gasoline, Charleston	11.50	11.50	11.00
U.S. Motor gasoline, Savannah	11.25	11.25	10.75
U.S. Motor gasoline, Jacksonville	11.25	11.25	10.75
California U.S. Motor gasoline, New York Harbor	12.00	11.75 –12.00	11.25
California U.S. Motor gasoline, Baltimore	11.75	11.75	11.25
California U.S. Motor gasoline, Philadelphia	11.50 –11.75	11.50 –11.75	11.25
Water white kerosene, New York Harbor	7.75 – 8.00	7.75 – 8.00	7.50 – 8.00
Water white kerosene, Philadelphia	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
Water white kerosene, Baltimore	7.75 – 8.00	7.75 – 8.00	7.50 – 8.00
28-34 gas oil, New York harbor	4.75 – 5.00	5.00	5.00
28-34 gas oil, Boston district	4.75	4.75	4.75 – 5.00
36-40 furnace oil, New York harbor	6.00	6.00	6.00
36-40 furnace oil, Boston district	6.00 – 6.25	6.00 – 6.25	6.25
Grade C bunker oil, New York harbor	$1.05	$1.05	$1.05
Grade C bunker oil, Boston district	$1.05 –$1.10	$1.05 –$1.10	$1.10
Diesel oil, New York harbor	$2.00	$2.00	$2.00

Note: Above prices do not include inspection tax levied in some states. *Minimum of 13c delivered.

MEDICINAL OILS

Russian 885-890 s.g. 325-330 vis	$0.80 – 0.90	$0.80 – 0.90	$0.80 – 0.90
Russian 870-875 s.g., 150-155 vis	$0.67 – 0.77	$0.67 – 0.77	$0.67 – 0.77
Russian 860-865 s.g., 80-85 vis	$0.65 – 0.75	$0.65 –$0.75	$0.65 – 0.75

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are per gal. in bbls. Cylinder oils are Penna. products.)

	Aug. 20	Aug. 13	Aug. 6
U. S. Motor gasoline	26.90	26.90	26.90
43-45 150 w.w. kerosene	18.65	18.40	18.40
42-44 110 s.w. kerosene	17.40	17.40	17.40
CYLINDER OILS			
Bright stock, dark	40.00 –42.00	40.00 –42.00	40.00 –42.00
600 D filtered	30.00 –32.00	30.00 –32.00	30.00 –32.00
600 Warren E filtered	25.50	25.50	25.50
600 s.r. unfiltered	20.00 –21.00	20.00 –21.00	20.00
650 s.r. unfiltered	22.50 –23.00	22.50 –23.00	22.00
600 flash, s.r.	25.00 –26.00	25.00 –26.00	25.00 –26.00
630 flash, s.r.	34.00 –36.00	34.00 –36.00	34.00 –36.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	19.50	19.50	19.50
250 vis. No. 6 color	18.50	18.50	18.50
200 vis. No. 6 color	18.00	18.00	18.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	23.50	23.50	23.50
180 vis. No. 3¼ color	19.50	19.50	19.50
100 vis. No. 2¼ color	15.50	15.50	15.25
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	34.50	34.50	34.50
500 vis. No. 6½ color	32.50	32.50	32.50
400 vis. No. 7¼ color	30.50	30.50	30.50
300 vis. No. 6 color	29.50	29.50	29.50
200 vis. No. 3¼ color	20.00	20.00	23.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70

WAXES (In cents per pound, f.a.s. carload lots)
WHITE CRUDE SCALE (In barrels)

	Aug. 20	Aug. 13	Aug. 6
122-124 A.m.p.	4.75 – 5.00	4.625– 4.75	4.50 – 4.75
124-126 A.m.p.	4.75 – 5.00	4.625– 4.75	4.50 – 4.75
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	5.375– 5.50	5.25 – 5.375	5.125– 5.25
125-127 A.m.p.	5.50 – 5.625	5.25 – 5.375	5.125– 5.25
128-130 A.m.p.	5.625– 5.75	5.50 – 5.625	5.375– 5.50
130-132 A.m.p.	6.00	5.75 – 6.00	*6.00 – 6.125
133-135 A.m.p.	6.875– 7.00	6.75 – 7.00	*6.625– 6.875
135-137 A.m.p.	7.25	7.25	*7.125– 7.375
YELLOW CRUDE SCALE			
124-126 A.m.p.	4.50 – 4.625	4.375– 4.50	4.25 – 4.375

*Prices nominal.

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over otherwise noted, representing sellers' opinions, except those prices specified to the contrary)

GASOLINE	Aug. 20	Aug. 13	Aug. 6
U. S. Motor	10.00 –10.25	10.50	10.50
60-62, 400 e.p.	11.00	11.00	11.00
61-63, 390 e.p.	11 50 –11.75	11.75	11.50 –11.75
64-66, 375 e.p.	12.00 –12.25	12.00 –12.50	12.00 –12.50
U. S. Motor, cases (cargoes)	$1.95	$1.95	$1.95
64-66, cases (cargoes)	$2.10	$2.10	$2.10

*Sales only.

KEROSENE			
44 water white	7.50	7.25 – 7.50	7.25 – 7.50
41-43 prime white	6.375– 6.50	6.25 – 6.50	6.25 – 6.50
Water white, cases (cargoes)	$1.65	$1.65	$1.65
Prime white, cases (cargoes)	$1.55	$1.55	$1.55

*Sales only.

DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	3.875– 4.00	3.875– 4.00	3.875– 4.00
*30-32 translucent gas oil	4.00	4.00	4.00
Grade C bunker oil	$0.80 –$0.90	$0.85 –$0.95	$0.85 –$0.95
Grade C bunker oil, cargoes	$0.65 –$0.70	$0.70	$0.70 –$0.75

*Less than ½ of 1% sulfur.

MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)

Heavy Panuco crude taxes to be paid	$1.00 –$1.02	$1.00 –$1.02	$1.00 –$1.02
Grade C bunker oil, for bunkering purposes, taxes paid	$1.10	$1.10	$1.10

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F.: cold test 0) (Tanker, f.o.b.Houston)

100 vis. No. 2 unfiltered pale	5.75	5.75	5.75 – 6.00
200 vis. No. 3 unfiltered pale	8.50 – 9.00	8.50 – 9.00	7.75 – 8.00
300 vis. No. 3 unfiltered pale	9.50 – 9.875	9.50 – 9.875	9.25 – 9.50
500 vis. No. 3½ unfiltered pale	11.00 –12.00	11.00 –12.00	10.50 –11.50
750 vis. No. 4 unfiltered pale	12.50 –13.00	12.50 –13.00	12.50 –13.00
1200 vis. No. 5 unfiltered pale	15.50 –16.00	15.50 –16.00	15.50 –16.00
200 vis. No. 5-6 red oil	7.00 – 8.00	7.00 – 8.00	7.00 – 7.50
300 vis. No. 5-6 red oil	8.00 – 9.00	8.00 – 9.00	8.00 – 8.50
500 vis. No. 5-6 red oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750 vis. No. 5-6 red oil	11.25 –11.50	11.25 –11.50	11.25 –11.50
1200 vis. No. 5-6 red oil	14.50 –16.50	14.50 –16.50	14.50 –15.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Aug. 20	Aug. 13	Aug. 6
Gasoline, U. S. Motor, 53-55 Gravity	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
Gasoline, U. S. Motor, blends and special cuts	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
Gas Oil, 30-34, per barrel	$1.10 –$1.20	$1.10 –$1.20	$1.10 –$1.20
Diesel Oil, 27 plus, per barrel	$0.95 –$1.10	$0.95 –$1.10	$0.95 –$1.10
Bunker oil, 14-18, per barrel	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
Fuel oil, 14-18 per barrel	$0.70 –$1.00	$0.70 –$1.00	$0.70 –$1.00
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125-150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Fuel is Active but Prices Sag; Kerosene Market Rises

Staff Special
NEW YORK, Aug. 18

ADVANCING kerosene prices together with active buying of fuel oil greatly overshadowed interest in the gasoline market at the Gulf this week. Prices for kerosene moved up 0.125 to 0.25-cent over last week, although no cargo sales were reported. Several spot cargoes of fuel oil were sold but prices for this product were headed down.

Aug. 14 Standard Oil Co. of New Jersey advanced its posted price of water white kerosene in cases for export 0.25-cent to 18.65 cents a gallon at New York. A similar advance in its price for bulk quantities at the Gulf was made shortly after, but it followed price increases by other large suppliers by two or three days.

The last kerosene business in the market was closed at 6.25 cents for prime white and 7.50 cents for water white. That was about the middle of last week. Advancing prices in the field together with extreme scarcity of goods caused several suppliers to raise their prices early this week, but even yet the differential between the Gulf and Mid-Continent is much less than it is normally.

Generally speaking suppliers were asking 6.50 cents for prime white at the end of this week, although one or two indicated they might do 6.375 cents and a firm offer on a part cargo was reported made at this price Saturday. For water white kerosene a minimum of 7.50 cents was quoted and several companies were indicating 7.75 cents as their selling price. A limited volume of goods is reported available for reasonably prompt loading at the Gulf.

The market was devoid of gasoline inquiries until Saturday when a Roumanian buyer entered with his order for approximately 30,000 barrels of U. S. Motor and 64-66, 375 end point gasoline for September shipment. There is a possibility of this business not being closed before the end of the month.

Suppliers were somewhat at variance in their ideas of prices for gasoline. They were about evenly divided on the low and high prices asked, however, with U. S. Motor at 10 to 10.50 cents and 64-66, 375 end point at 12 to 12.50 cents.

Foreign buyers were eyeing California prices with a great deal of interest because that market is about 0.25 to 0.5-cent behind the Gulf. In the past they have not favored California gasoline, largely because of its high natural gasoline content. For this reason Gulf suppliers have been inclined to doubt if they were serious about obtaining their requirements on the west coast.

Brokers nevertheless were seeking offers for the foreign trade. A cargo of U. S. Motor gasoline was offered at 9 cents for September-October shipment. With tanker rates to Continental ports at their present low levels, this figure is approximately 0.25-cent under U. S. Motor at the Gulf. Higher gravity gasolines also were offered at prices 0.25 to 0.5-cent under the Gulf.

Heavy oil buying, both domestic and foreign, continued good at the Gulf this week. Three cargoes of Grade C were reported sold at $0.65 a barrel, 5 cents under last week's low. One cargo of high gravity Grade C was reported closed at $0.67. Low gravity oil was offered as low as $0.63 with no takers.

Bunker prices have not yet reflected the drop in the cargo market. In the New Orleans district, $0.80 was still asked for bunkers and $0.90 was quoted further west in the Gulf. Mexican bunker markets also were unchanged.

Philadelphia Gasoline Market Advanced; Others Are Steady

Staff Special
NEW YORK, Aug. 18

GASOLINE tank car and tank wagon prices were stationary in most eastern domestic markets this week.

However, Atlantic Refining Co. Aug. 16 advanced its prices of gasoline 1 cent in Pennsylvania and Delaware to 18 cents tank wagon and 20 cents service station, exclusive of tax. The following day, it raised its price of U. S. Motor gasoline, delivered in tank cars, to 13 cents, this price applying to points within a 1-cent freight radius of Point Breeze.

There was considerable talk among the trade of companies in other markets raising their prices proportionately but to the end of the week none had done so.

The eastern jobbing trade is pretty well covered for its gasoline requirements the rest of August and apparently refiners are in no hurry to get their prices up for September.

Another important company in the Philadelphia market, however, late this week indicated the likelihood of its meeting 12 cents in tank cars f.o.b. refinery and the probability of its going still higher.

Spot buying, as had been generally expected, was slow this week. Jobbers were pretty well covered for their late August requirements at 11.25 cents, and subsequently but few spot orders have been received since the last advance of 0.5-cent to 11.75 cents. In a few instances, however, sellers reported receiving orders for occasional cars at 11.75 cents from distress buyers, and that this price was paid with little or no reluctance. One large dealer nevertheless reported he would have to book a considerably larger volume of business at 11.75 cents before he would consider advancing his prices again.

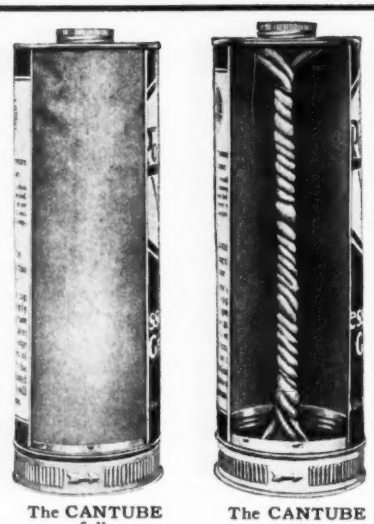
A large terminal operator in the Philadelphia district continued to offer sizable quantities of both U. S. Motor and California gasoline at 11.50 cents but no other company in the north Atlantic area was quoting less than 11.75 cents.

Standard Oil Co. of New Jersey advanced its tank car prices of water white kerosene at Charleston, S. C., to 7.75 cents Aug. 17. Charleston is usually 0.25-cent under northern seaboard points and the company's action in placing it on an equal basis with Baltimore and Bayonne emphasized recent reports that kerosene was scarce, and that refiners were determined to get higher prices for their goods. With the fall demand for kerosene close at hand, several persons of the trade believe repetition of the early 1926 market, when kerosene came within a cent of touching gasoline, would not be surprising.

Gas oil was available at 4.75 cents in tank cars at New York harbor this week and there were reports that even this price might be shaded. Furnace oil was available in one or two spots at 5.75 cents against a minimum of 6 cents a week ago.

Posted prices for Grade C bunker oil were unchanged along the east coast with New York harbor at $1.05, f.o.b. terminals. The drastic drop in prices at the Gulf the last two weeks, however, forecasts an early reduction in east coast prices, according to several persons of the trade.

CHICAGO—"The Illinois Central Railroad has purchased one 600 horsepower oil-electric locomotive from the Ingersoll-Rand Co. and the General Electric Co. It will be used in switching service in Chicago."



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Wax Buying Becomes More Active in New York

NEW YORK, Aug. 18.—More active buying than for some weeks and limited offerings from refiners sent prices for all grades of wax, both scale and fully refined, up 0.125 to 0.375-cent this week.

The buying is but a forerunner of what is to come in the next 30 to 60 days, according to present indications. Tentative inquiries were in the market the last week for approximately 1,000 tons of goods. It was in view of this that the trade concluded the hand-to-mouth buying policy which foreign buyers have been pursuing of late was about to be broken.

The interesting part of the current market, as one active wax trader expressed it, is that a minimum amount of buying, relatively speaking, has been done in the last few months, but in spite of this the market has climbed rapidly. With only a half way fair volume of buying from abroad in the next 60 days, prospects are good for the market going still higher. Foreign buyers are beginning to think seriously now of their fall requirements, and the downward trend of stocks at refineries shows no signs of letting up.

Sales of white crude scale were reported at New York this week at prices ranging from 4.75 to 5 cents a pound. One large refiner said his commitments totaled approximately 600 tons at 4.75 cents for delivery over the first half of September. It is this phase of the market that is absorbing the greater part of the activity. Goods for late August shipment are practically unobtainable, although one large sale was said to have been made at 5 cents a pound, delivery to begin next week and to extend through October. A third transaction involving a large quantity of white crude scale was closed at 5 cents for October delivery. Two large buyers of scale were feeling out the market with a view to buying 600 to 700 tons.

Demand for fully refined wax continued good and this division of the market remained extremely tight. Offerings of the lower melting point grades were small and the higher melting points were virtually unobtainable. It was purely a sellers' market. The 125-127 A.m.p. grade was quoted at 5.50 to 5.625 cents; sales were reported at the former figure, and the latter was the generally asking price at the end of the week. The only refiner making 130-132 A.m.p. quoted 6 cents.

Activity at New Orleans was on a par with New York and prices here were equally as strong. Sellers at the close of the week were asking 4.75 to 4.875 cents for white crude scale; one reported he had turned down an offer of 4.875 cents for a large order, and 4.625 cents was being freely bid by buyers, apparently with no success.

One resale of 125-127 A.m.p. fully refined was at 5.375 cents a pound was reported early in the week; sellers Saturday were asking 5.625 cents, the top of the price range for this grade at New York.

U. S. Bureau Investigates Reclaiming of Oil

WASHINGTON, Aug. 20.—At the request of Brigadier General Henry C. Smithers, chief coordinator of the U. S. Government, the Bureau of Standards is investigating the practicability of reclaiming the lubricating oil drained from the crankcases of government owned automobiles and trucks. It has been represented to the general that enormous savings are possible by this means.

The chief coordinator is the officer who tries to keep Bureau A, for instance, buying a lot of mahogany furniture when in the government store houses there are so many sets of such furniture taken from discontinued offices, that plans are being made to extend the storage warehouses. He is the chief cog in the Coolidge economy machine intended to prevent the useless expenditure of money for things that are a glut in some other part of the government.

The government pays about 35 cents a gallon for lubricating oils. In the view of the technical men of the government departments it is a commercial proposition rather than a technical one with which the chief coordinator is dealing. In other words that reclamation of lubricating oil is not technically a hard proposition at all. On the contrary it is simple. The question is as to whether the operation produces a result that can be measured in dollars saved for the treasury.

Meetings for Whole Year Are Prearranged

MILWAUKEE, Aug. 18.—"The Thunder Bird," official organ of the Wisconsin Petroleum association announces that the oil men of the state have arranged the time and place of every meeting for nearly a year. The meeting schedule follows:

Sept. 12, Wausau hotel, Wausau; Oct. 17, Green room, Schroeder hotel, Milwaukee; Dec. 12, Green room, Schroeder hotel, Milwaukee; Jan. 16, 1929, Park hotel, Madison; Feb. 13, Park hotel, Madison; March 13, Green room, Schroeder hotel, Milwaukee; April 10, Green room, Schroeder hotel, Milwaukee; May 15, Beaumont hotel Green Bay.

Light Oils Enjoy Steady Climb To Better Price Levels

CHICAGO, Aug. 18

GRADUAL but steady advance has characterized the active commodities in the Chicago resale market for the week ending Aug. 18. One week ago actual sales of 58-60, 437 e.p. gasoline had been recorded at 9.75 cents although that was the top of the market. It could still be obtained at that price on Aug. 18 from a number of sources, but it was the bottom of the market.

This steady advance in prices has characterized the gasoline market for several weeks. There have been no days when the market seemed to weaken. There have been no "soft spots" developed in the market, allowing buyers to obtain material from outside of Group 3 with freight adjusted to Tulsa cheaper than the going price in Oklahoma. The rise has been steady since it left 5.75 cents.

Gasoline of 60-62 gravity with a 437 end almost vanished from the Chicago market during the last week. Nobody was anxious to buy a slightly superior product. The tendency was to look for something cheaper. However, the volume of material inferior to United States specifications moving through the Chicago market has been comparatively small.

Kerosene kept moving up this week also, making gradual gains in addition to its spectacular upturn a week or more ago. Jobbers throughout the territory say the early kerosene demand is unusual, explaining that farmers are able to plow their grain fields earlier than usual on account of favorable weather conditions. Scarcity of the goods undoubtedly is the ruling factor in its price advance.

There has been some speculative talk in Chicago about another tank wagon price advance in Standard Oil Co. of Indiana territory. This undoubtedly has been a case of the "wish being father of the thought." There are still a great many jobbers who do not have marginal contracts with refiners and present price conditions are unfavorable for spot buyers. Just now the jobber with a contract 6 cents under the service station price has a better deal.

Distillates and gas oils have held their own over the week but have made little or no progress up the price scale. They might have declined in price but for the fact that refiners are not at all disposed to relinquish their crackable materials at a sacrifice. Sellers have been holding on to their straight reduced goods.

Zero fuels and gas oils have shown a tendency to firm up in price this week. There have been some purchases by big city jobbers, enough to keep the market from vanishing from the record. Furnace oil jobbers have been in the market for small quantities of oils all summer, moving it to the tanks of their customers almost as fast as they received it, but the annual cleaning and filling of domestic oil tanks is about over.

Now the fuel jobbers are watching their chances to replenish their own storage at favorable prices and their inquiries have kept the market alive.

Fuel oils from west Texas, moving to the industrial consumer at between 50 and 60 cents a barrel over the past two weeks, has had a bearish influence on the Oklahoma fuel market. The 50-cent fuel has almost disappeared but it is abundant at 55 cents, which makes the Oklahoma refiner exert more sales effort and seek a slightly more restricted market for his product.

The main distinction between the two oils, as far as the consumer is concerned, is that the Texas oil has more sulfur than can be used in steel mills where the flame comes in direct contact with the metal. Otherwise the new west Texas product has some individual advantages, such as a low cold test. In almost every respect the west Texas 18-22 fuel supplies the same demand in the Chicago vicinity formerly supplied by Smackover treated fuel before it was practically barred from the market by freight adjustment.

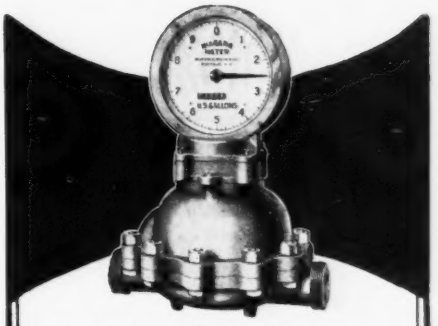
The weather in Standard Oil Co. of Indiana territory for the week ending Aug. 25, according to official prognostications by the Chicago branch of the United States weather bureau, will be favorable to motoring. Rain is forecast for Monday or Tuesday but thereafter it will be fair and temperature changes are expected to be inconsequential.

Gulf Coast Lubricants Steady

HOUSTON, Aug. 18.—Gulf Coastal lubricant manufacturers report continued satisfactory demand at the higher price levels recently prevailing. Sales have slowed somewhat in the last ten days, but steady shipments are reported on old orders. Refinery sales managers expect considerably increased volume by October. Plant stocks are reported to be low on a number of grades, including 500 and 750 viscosity.

S. O. Ohio Out of Market

CLEVELAND, Aug. 20.—Standard Oil Co. of Ohio is still out of the spot tank car market for gasoline in Ohio. It was said today September offerings may not be made until the end of this week.



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HOUSTON, TEXAS

Pioneers in Oil to Organize During Tulsa Exposition

TULSA, Aug. 11

THE Grand Old Man of the oil industry of the world will be chosen during the International Petroleum Exposition to be held in Tulsa Oct. 20-29. Permanent organization of an association of old timers will be made under international auspices during the exposition.

Success of the old timer events last year led to the plans for a permanent organization. Membership of the Old Timers Association will be made up of those who started in the oil business 50 years ago or longer. Nominations for membership in the organization, which are made on blanks which will be printed in trade journals and newspapers featuring oil news, will be all that is necessary for a nominee who is qualified to be placed on the rolls. The Grand Old Man of the industry for Tulsa and for the duration of the coming exposition will be selected from the membership list. He will be official host to other oldtimers attending the oil show.

The life-time of the members of the association will embrace nearly the entire period of the intensive development of the oil industry. They will be honored guests in the midst of appliances and machinery unknown to them in their day, but fathered nevertheless by the work which they did.

Last year many of these pioneers of oil attended the exposition, where they were presented with medals donated by another old-timer in the oil business, John D. Rockefeller. Appropriate insignia will be presented them again this year.

The committee in charge of Old Timers events consists of: B. E. Horrigan, chairman, A. W. Leonard, Devonian Oil Co.; Glenn Condon, Skelly Oil Co.; A. J. Rowley, Oil & Gas Journal; F. O. Larson, Tulsa World; Omer K. Benedict, First National Bank, Tulsa; J. P. Flanagan, oil operator; Waite Phillips, oil operator and capitalist; Henry Ketchum, Tulsa; John D. Mayo, Tulsa; J. Edgar Pew, former president of the American Petroleum Institute; E. W. Clark, president of the A. P. I.; T. A. O'Donnell, former president of the A. P. I.; J. H. Markham, oil producer, W. G. Skelly, president of the Skelly Oil Co. and president of the Exposition; H. H. Rogers, president of the Exchange National Bank, Tulsa; James Amm, New York. Make your nomination on the accompanying blank.

Gulf to Run Its Own Yates Field Oil

HOUSTON, Aug. 18.—The Railroad Commission of Texas has been asked to allow increase of permitted production from the Yates field, Pecos county, to 72,500 barrels daily from 65,000 barrels daily. Permission probably will be granted, as have been most requests of the operators' advisory committee in the past.

The request was made in connection with Gulf Production Co.'s announced intention of running its own oil after Aug. 20. As the Gulf proposes running 7500 barrels daily through its pipeline the outlet will be increased by that amount. Present runs of 65,000 barrels daily are divided among the affiliated pipelines of the Humble, Roxana and Mid-Kansas companies.

GRAND OLD MAN OF THE OIL INDUSTRY

I desire to nominate for membership in the "Old Timers" organization of the International Petroleum Exposition:

Mr. .....

Address .....

If possible give the following information:

Date of Birth .....

Place of Birth .....

Date started work in oil industry.....

Place started to work .....

Branch of industry .....

Kind of job .....

State whether pumper, driller, producer, etc.

Is he still engaged in oil industry?.....

Signed .....

Address .....

NOTE: Mail at once to B. E. Horrigan, Chairman of Old Timers' Committee, International Petroleum Exposition, 207 Bliss Bldg., Tulsa, Oklahoma.

"GRAND OLD MAN'S CONTEST"

All Tulsans nominated for membership will become candidates for the honor of "Grand Old Man of the Oil Industry," who will act as official host to all old timers at the exposition. During the exposition the "Grand Old Man" of the entire oil industry of the world will be selected.

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BROWN SHEET IRON & STEEL CO. **ST. PAUL, MINN.**

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Make of Truck..... Size Tank Required.....

Other equipment on which you may send prices.....

Name..... Address.....

Transactions in Oil Shares on New York Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Aug. 18 Sales	First	High	Low	Last	Change
37¾	27⅝	38	27¼	(sh) 922,075	N.P.	Amerada Corp.	50cQ	July 31, 28	2,400	31¼	31½	30¾	31½	+ ⅞
82½	35⅛	85	51¼	(sh) 209,180	N.P.	American Republics Corp.	....	.....	81,000	65	68⅝	62½	65⅞	+ 1⅝
50¼	35	46⅜	37½	$56,000,000	$ 25	Associated Oil.	50cQ	June 30, 28	110	48	48⅞	47½	48⅞	+ ⅞
131⅜	104	169½	95¾	50,000,000	100	Atlantic Refining.	$1Q	June 15, 28	140,100	155½	167½	153	163	+ 9¼
119	115½	118¼	115	20,000,000	100	do pfd.	$1.75Q	Aug. 1, 28	100	116	116	116	116	+ 1
35½	20¾	26⅞	20½	28,725,675	25	Barnsdall Corp. A.	....	Feb. 6, 28	17,000	24⅛	24⅞	24	24¾	+ ⅝
32½	20½	27¼	22	799,775	25	do B.	....	Feb. 6, 28	100	24	24	24	24	+ 3½
18¼	14	20¼	12¼	945,888	N.P.	Beacon Oil.	....	.....	4,800	16⅝	17¼	16½	17½	+ ⅝
32⅞	20	32¾	24	51,524,150	25	California Petroleum.	25cQ	July 2, 28	600	30½	31⅝	30½	31½	+ 1¾
96¾	65	94⅞	70	20,785,400	100	General Asphalt.	....	.....	9,300	72½	75⅞	72	74⅞	+ 3⅛
144⅞	107¼	141½	111	6,792,200	100	do pfd.	$1.25Q	June 1, 28	400	115	116	113¾	116	+ 2¼
175¾	60⅛	167	127	25,000,000	100	Houston Oil.	....	.....	35,400	140	143⅛	137½	139½	— ½
32¾	17⅝	31⅞	21¾	(sh) 500,000	N.P.	Independent Oil & Gas.	25cQ	July 31, 28	9,800	26	26½	26	26¾	— ⅛
12⅛	7⅝	39⅝	9	$3,280,340	$10	Indian Refining.	....	Dec. 15, 20	40,300	32⅝	32⅞	31¼	32	— ⅜
12	7¼	37¼	8½	4,550,110	10	do ctfs.	....	.....	15,500	28¾	31⅛	28	29½	+ ½
112	99	238	101	2,296,400	100	do pfd.	....	Dec. 15, 21	200	...	230	220	230	+10
37¾	20½	39½	27⅜	(sh) 3,992,122	N.P.	Lago Oil & Transport.	75cQ	May 1, 28	600	31	32	31	31½	0
18⅞	10	19¾	9⅜	(sh) 1,237,078	N.P.	Louisiana Oil Refining.	.....	.....	8,100	14⅛	14⅝	14	14¼	— ¼
97	85¼	101	78	$4,000,000	$100	do pfd.	$1⅝Q	Aug. 15, 28	.....	.....	.....	.....	.....	.....
22¾	12	25½	12½	(sh) 330,000	N.P.	Maracaibo Oil.	....	.....	300	16¾	16¾	16½	16½	— ⅛
58½	31	44½	33	(sh) 2,316,692	N.P.	Marland Oil Co.	....	Mar. 31, 27	14,600	37¼	38⅛	36⅞	37⅝	+ 1¼
320	200	360	250	$45,942,800	$100	Mexican Petroleum.	$3Q	July 20, 28	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	12,000,000	100	do pfd.	$2Q	July 20, 28	.....	.....	.....	.....	.....	.....
9¼	3	39	4⅝	(sh) 945,939	N.P.	Mexican Seaboard.	....	Nov. 15, 24	72,500	29¼	31	28⅝	29⅜	0
39⅜	25½	33¼	25⅛	(sh) 1,357,461	N.P.	Mid-Continent Petroleum.	....	Aug. 1, 27	5,400	30	30½	29	29⅛	— ¾
105	97	115⅛	103¼	$6,718,000	$100	do pfd.	$1.75Q	June 1, 28	1,000	114	114	114	114	+ 3¼
3¾	1⅝	7⅜	2⅜	24,298,850	10	Middle States.	....	July 1, 23	5,500	4⅝	4⅝	4½	4⅝	+ ⅛
2¾	1⅜	5⅞	1½	5,501,370	10	do ctfs.	....	.....	1,300	3⅛	3¼	3⅛	3⅛	0
1⅞	1	2¼	1¼	(sh) 3,500,000	N.P.	Pacific Oil.	....	.....	4,600	1¼	1⅜	1¼	1⅜	0
65⅞	40½	53¾	38¼	$48,807,400	$ 50	Pan American P. & T.	....	Oct. 20, 27	2,900	41	42	41	42	+ 1⅝
66¾	40¼	54⅝	37¾	121,097,900	50	do B.	....	Oct. 20, 27	11,000	42⅞	43¼	42	42½	— ⅛
37⅞	16¾	28⅜	15½	(sh) 400,000	N.P.	Pan American Western B.	....	Jan. 30, 27	3,700	17	17⅛	17	17⅛	+ ¼
18⅞	8	21⅜	11½	(sh) 198,770	N.P.	Panhandle P. & R.	....	.....	1,400	14½	14½	13⅝	14	— ⅝
83	54	106¼	70	$2,935,200	$100	do pfd.	.....	July 2, 23	1,000	85	85	85	85	— ½
60¼	36¼	44⅝	35¼	(sh) 2,406,796	N.P.	Phillips Petroleum.	37½cQ	July 2, 28	13,400	39⅛	40⅞	39	40⅛	+ 1⅛
1⅛	½	4⅛	½	$29,622,925	$ 25	Pierce Oil Corp.	....	.....	3,800	2¼	2½	2¼	2¼	0
24	13½	30½	16¼	15,000,000	100	do pfd.	....	Feb. 1, 22	1,300	21	21	20	20¼	— 2½
5½	2½	6⅝	3½	(sh) 2,500,000	N.P.	Pierce Petroleum.	....	.....	4,300	4⅛	4⅜	4	4¼	0
33⅜	16¾	26⅞	16	$37,450,850	$50	Producers & Refiners.	....	Sept. 15, 23	3,200	24	24¼	23½	24	0
50	36⅞	46⅞	41	2,845,350	50	do pfd.	.....	May 1, 25	10	42¼	42¼	42¼	42¼	+ ¼
33½	25	27½	19	75,959,250	25	Pure Oil Co.	12½cQ	June 1, 28	9,200	23	24⅜	22⅜	23	+ ⅛
115½	111⅜	115	108	13,000,000	100	do 8% pfd.	$2Q	July 2, 28	90	113⅛	113⅛	112½	112½	0
28⅝	25⅜	50¾	24	$29,224,894	$25	Richfield Oil.	‡25cQ	Aug. 15, 28	20,400	46	46⅞	45½	46⅜	+ ⅜
54½	44¼	56¾	44⅜	(sh) 611,303	13.40	Royal Dutch, N. Y. shares.	$1.879	Aug. 3, 28	17,600	56	57⅞	55¾	57¾	+ 2⅜
47⅞	41⅜	51	40⅜	(sh) 77,590	L2	Shell Transport & T.	$1.455	July 23, 28	400	50	50	50	50	+ 1¼
31¾	24⅜	31	23¼	(sh) 10,000,000	N.P.	Shell Union Oil.	35cQ	June 30, 28	14,700	26½	27	25¾	26⅞	+ ⅞
26⅜	14¼	24¾	18⅛	$7,208,080	$ 10	Simms Petroleum.	....	Apr. 1, 27	2,400	20⅝	21⅜	20⅜	21⅛	+ ½
22⅜	15	30¼	17⅜	(sh) 4,501,915	N.P.	Sinclair Consolidated.	....	May 31, 24	93,500	26¾	27½	26	26½	— ½
104½	97	109½	102½	$16,604,600	$100	do pfd.	$2Q	Aug. 15, 28	.....	.....	.....	.....	.....	.....
37⅜	24⅛	34	25	27,396,590	25	Skelly Oil Co.	50cQ	June 15, 28	9,200	31½	31½	30	30¾	— ¾
60¾	50⅜	63⅞	53	(sh) 13,016,434	N.P.	S. O. California.	62½cQ	June 15, 28	15,500	57¼	57¾	56½	57	0
41⅜	35⅛	49	37¾	$607,910,525	$ 25	S. O. New Jersey.	‡25cQ	June 15, 28	51,000	45⅛	46¼	44⅝	45⅛	+ ¼
34½	29¾	41½	28¾	427,973,275	25	S. O. New York.	40cQ	June 15, 28	50,300	35⅜	36¾	35	35⅛	+ ¼
34⅞	30	49½	31½	(sh) 1,206,073	N.P.	Sun Oil.	25cQ	June 15, 28	4,600	46⅞	*49½	46	49	+ 1⅜
101⅝	99	109½	100	$5,000,000	$100	do pfd.	$1.50Q	June 1, 28	.....	.....	.....	.....	.....	.....
6½	3⅛	9¼	2¼	(sh) 1,121,368	N.P.	Superior Oil Corp.	....	Dec. 20, 20	5,300	6½	6⅝	6¼	6½	+ ½
58	45	66⅜	50	$180,480,550	$ 25	The Texas Corp.	75cQ	July 2, 28	56,400	60⅞	63¼	60⅛	62⅛	+ 1⅝
18⅛	12	17½	12½	8,380,340	10	Texas Pacific Coal & Oil.	....	Jan. 3, 28	4,500	13⅞	14¼	13⅝	14¼	+ ½
29⅛	19	27⅛	19⅝	(sh) 2,168,410	N.P.	Tide Water Oil Co.	20cQ	June 30, 28	1,100	26	26½	25½	26½	— ⅜
90⅛	85	94½	87	$20,705,200	$100	do 5½% pfd.	$1.25Q	Aug. 15, 28	300	86⅞	87⅝	86⅞	87⅝	— ⅜
19⅛	15¾	20⅝	14⅜	(sh) 4,796,158	N.P.	Tide Water Associated.	....	Aug. 1, 27	382,000	18⅝	21⅛	18	21	+ 2⅞
90¾	85	90	82⅛	$72,745,900	$100	do pfd.	$1.50Q	July 2, 28	1,600	89	89¼	88	89	0
10⅜	3¾	10⅛	7	(sh) 3,742,029	N.P.	Transcontinental Oil.	.....	.....	13,500	7⅝	7⅞	7⅝	7⅝	— ¼
56½	39⅝	57	42¾	$40,791,225	$ 25	Union Oil of California.	50cQ	Aug. 10, 28	5,100	50⅝	51⅛	49½	50⅝	+ ⅜
127½	94	128⅛	115½	30,844,000	100	Union Tank Car Co.	$1.25Q	June 1, 28	.....	.....	.....	.....	.....	.....
34½	24½	38⅜	26	(sh) 310,956	N.P.	Warner Quinlan.	50cQ	July 2, 28	3,500	37	37⅞	36⅝	37½	+ ¾
27½	20	26⅝	20⅛	(sh) 490,000	N.P.	White Eagle Oil & Refining.	25cQ	July 20, 28	2,600	25	25	24⅜	24½	— 1

*New High †New Low ‡Also extras s-Stock Total Sales 1,281,810

Pittsburgh Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended Aug. 17 Sales	First	High	Low	Last	Change
....	....	4	2½	N.P.	Ark. Nat. Gas (new).	7,240	2¾	2⅞	2⅝	2¾	+ ⅛
....	....	7½	6¾	N.P.	do pfd.	1,522	7¼	7½	7¼	7⅜	+ ⅛
98⅝	80¾	114½	90¾	100	Columbia Gas.	82	114	*116	114	116	+ 1
107⅞	100	108½	107	100	do pfd.	.....	....	....	....	....	.....
15	7½	10	7	10	Devonian Oil.	130	7½	7½	7½	7½	+ ½
....	....	15	9¾	10	Dixie Gas & Util.	.....	....	....	....	....	.....
....	....	95	85	100	do pfd.	.....	....	....	....	....	.....
117½	115	116	115	100	Duquesne Light pfd.	.....	....	....	....	....	.....
....	....	85	80½	100	Fayette County Gas.	.....	....	....	....	....	.....
12¼	6	22	12	N.P.	Houston Gulf Gas.	.....	....	....	....	....	.....
59¼	37¼	58	48⅝	$ 25	Lone Star Gas.	1,840	52	52½	51⅝	51⅞	— ⅜
....	....	36½	36	25	Petroleum Exploration	25	36	36	36	36	— ½
3⅞	3	4	3¼	5	Pittsburgh Oil & Gas.	245	3¼	3¼	3¼	3¼	0
8	5½	7¼	6	10	Salt Creek Cons.	.....	....	....	....	....	.....
26½	17	22	16¾	10	Tidal Osage.	.....	....	....	....	....	.....
43	33	33⅜	30½	N.P.	Waverly Oil Wks. A	.....	....	....	....	....	.....
....	....	19	17½	$ 25	Wiser Oil.	.....	....	....	....	....	.....

*New high record †New low.

Pittsburgh Curb Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended Aug. 17 Sales	First	High	Low	Last	Change
....	....	10¼	9	10	Ark. Nat. Gas (old).	.....	....	....	....	....	.....
95	88	132	120	25	Gulf Oil.	.....	....	....	....	....	.....
....	....	115	115	....	Houston Gulf Gas pfd.	.....	....	....	....	....	.....
10¾	5½	9	5½	25	Leonard Oil & Dev.	200	6	6	6	6	— ½
2.70	.30	1.00	.50	10	Omar Oil & Gas.	.....	....	....	....	....	.....
....	....	.40	.20	....	Phoenix Oil.	.....	....	....	....	....	.....
2¼	1¾	....	....	5	Pittsburgh Oil Dev.	.....	....	....	....	....	.....
31	19	22	16¾	5	Plymouth Oil.	2,080	19	20	19	19⅞	+ ⅛
6	5	4¾	4	5	States Oil.	.....	....	....	....	....	.....
3 1/4	1½	4½	2¼	1	Texon Oil & Land.	1,700	3¾	3¾	3⅝	3⅝	0
23¾	18	18	15	10	Tidal Osage Non-vgt.	.....	....	....	....	....	.....

*New High †New Low x Ex Dividend

Cleveland Stock Market

August 17	Par Value	Bid	Asked	Last Sale
Canfield	100	110	...	115
do pfd	100	101	...	101
Fred G. Clark	10	7½	8	8
National Refining	25	34¾	35⅞	36
do pfd	100	131	135	131
Paragon Refining Co	25	16¼	16½	16⅜
do pfd	100	115	125	125
do ct'fs of dep	...	16¼	17½	16½

LOS ANGELES, Aug. 17.—Southwestern Engineering Corp., 606 South Hill street, Los Angeles, has issued bulletin No. 10 which is given over to illustrations and descriptions of gas coolers, final condensers, atmospheric open type coolers and vapor-to-liquid heat exchangers. A copy of this bulletin will be mailed to those interested.

The National Cantube Co., Inc., Chicago, announces that James E. Grimes has replaced M. J. Schneider as president, all the other officers remaining the same.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

REFINERY SUPERINTENDENT, eighteen years experience, thoroughly familiar with designing, construction and operation of modern skimming, lubricating and cracking plants. Address Box 129.

ACCOUNTING AND FINANCIAL EXECUTIVE American, 40, married, tactful, industrious, best of references, possesses initiative and ability. Seven years experience as vice president, secretary-treasurer and comptroller of oil companies. Eight years experience with one of the leading certified public accounting concerns. Capable of providing management with complete accounting and as budgetry control of corporation's activities. Address Box 149.

ALL ROUND MAN, married, 15 years experience in general marketing; one year foreign. Desires immediate connection, anywhere. Will assist busy executive, or assume complete charge small company. Address Box 158.

ENERGETIC REFINERY MAN, 27, single. Five years Refinery experience, construction, cracking, treating, laboratory, lubrication and combustion. Prefer field work. Box 157.

Situations Open

TANK CAR LUBRICATING SALESMAN WANTED

Experienced salesman familiar with jobbers in Middle West States, to act as refinery representative.

Address Box 156

TWO DRAFTSMEN WANTED

Experienced in oil refinery work, familiar with pipe still and pressure still designing. Steady employment to the right party. Give full information, including experience, education and salary desired, and recent photograph with application.

Address Box 151

LUBRICATION SALES-ENGINEER WANTED

Experience in application of petroleum products, to industrial uses and all types of machinery; for cooperative work with Sales Dept. in Pennsylvania, Southern New Jersey, Maryland area. Only man with broad previous experience considered. Give complete details of education and experience.

Address Box 141

Situations Open

EXPERIENCED OPERATOR ON PIPE STILL DISTILLATION UNITS

for permanent position in Roumania. Must be single and have good record. Excellent chance for advancement.

Arthur G. McKee & Co.,
2422 Euclid Ave.,
Cleveland, O.

Business Opportunities

For lease in city of Indianapolis three excellent locations for filling stations or other business. P. O. Box 558, Chanute, Kans.

GASOLINE BULK PLANT FOR SALE

Located in southern Indiana. In 1927, this business sold 359,484 gal. gasoline; 100,000 gal. kerosene; besides oils, greases and alcohol. During the first five months of 1928 this business sold 176,154 gal. gasoline; 54,010 gal. kerosene, besides oils and greases. Are distributors for highly-advertised product, on long margin of profit. Also has 3-pump modern retail station in center of town on state highway; also has 25 gasoline pumps outstanding. Storage for 75,000 gal. gasoline and kerosene. Plant is completely equipped to do a wholesale and retail business. Very good reasons for selling. Can be bought with very reasonable down payment; liberal terms and long-time payments on balance of sale price. Address

Box 153, care of
NATIONAL PETROLEUM NEWS

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."

"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Positions Wanted"—5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

Equipment Wanted

AM INTERESTED IN PURCHASING quickly several hundred fifty-five gallon seamless steel bilged shell I. C. C. shipping drums in first class condition. Address Box 155.

For Sale

FOUR-COMPARTMENT GASOLINE DISTRIBUTING TANK

for sale, mounted on 3½ ton Sanford truck, compartments holding 260, 257, 260 and 260 gallons. A-1 condition.

Address F. H. Wells,
Savannah, N. Y.

PRINTED FILLING STATION REPORT FORMS at low prices. Keep a perpetual inventory of accessories and everything in your filling station by this accurate short cut system. George H. Blood, Jr. Marlboro, Mass.

REFINERY FOR SALE

1000 barrels plant—cracker—located for river connection for crude—in heart of large market for gasoline.

C. R. Cooper
P. O. Box 729
Cincinnati, Ohio

Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 W. 3rd St., Cleveland, Ohio, unless otherwise specified.

Standard Oil Stocks on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Aug. 18 Sales	First	High	Low	Last	Change
21⅝	17⅞	22¾	17	£ 4,126,460	£ 1	Anglo-American Oil	24.4c	June 6, 28	3,600	17¾	18⅜	18	18¼	+ ⅜
21½	17⅝	20½	16⅜	.....	£ 1	do cts. non-voting	.....	.....	100	17⅝	17⅝	17⅝	17⅝	+ ¼
3¾	¾	5	1¼	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	.....	.....	.....	.....	.....	.....
6½	2½	9¾	3¼	$ 10,000,000	$ 50	do pfd	.....	.....	100	5¼	5¼	5¼	5¼	+ ⅛
69	50	56	49	1,000,000	25	Borne Scrymser	‡$18.A.	Apr. 16, 28	.....	....	....	....	....	.....
60	45	76	58	10,000,000	50	Buckeye Pipe Line	‡$1Q	June 15, 28	.....	....	....	....	....	.....
126	76½	161	117¼	3,000,000	25	Chesebrough Mfg	$1Q	June 30, 28	100	145	141	141	141	— 4
22⅝	16¼	23	16	36,123,350	10	Continental Oil	.....	Dec. 15, 27	4,200	16¾	17⅜	16⅝	17	+ ¼
137	89	114	88	3,000,000	100	Cumberland Pipe Line	‡$2Q	June 15, 28	300	100	102	97	102	+ 4¾
68½	47	88	64⅛	5,000,000	100	Eureka Pipe Line	$1Q	Aug. 1, 28	50	70	70	70	70	0
13½	3½	13	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	.....	....	....	....	....	.....
59¾	23	87¼	27	4,000,000	100	do new pfd	.....	June 30, 26	.....	....	....	....	....	.....
60⅛	35½	89¾	35	2,000,000	100	do old pfd	.....	June 30, 26	.....	....	....	....	....	.....
68½	54	84⅞	60	3,685,700	25	Humble Oil & Refining	‡30cQ	July 1, 28	8,400	79½	81	79¼	80	0
182	123¾	245	176½	2(000 000	100	Illinois Pipe Line	$6S.A.	June 15, 28	350	207	207	205⅛	205⅛	— 2⅜
64¾	37¾	71⅞	56¾	( ) 458,267	N.P.	Imperial of Canada	‡25cQ	June 1, 28	800	65⅝	67	65½	66⅞	+ ⅞
94½	61	89½	74⅞	$ 5,000,000	$ 50	Indiana Pipe Line	‡$1Q	Aug. 15, 28	300	82	82	81½	81½	+ 1¼
39	28¼	45¼	35	(h) 7,123,544	N.P.	International Petroleum	25c	June 30, 28	5,800	37¾	39	37½	38¼	+ ¾
24	13¼	32⅜	19⅜	6,363,350	12.50	National Transit Co	‡25cQ	June 15, 28	1,400	20⅛	21½	20⅛	21¼	— ⅛
44½	31¼	59⅛	37½	5,000,000	100	New York Transit	.....	July 15, 26	250	53	53	52½	53	0
100	70	125	94	4,000,000	100	Northern Pipe Line	$3S.A.	July 2, 28	.....	....	....	....	....	.....
67⅞	52	68¼	58	60,000,000	25	Ohio Oil Co	‡50cQ	June 15, 28	700	63	63	62⅝	62⅝	— ⅛
39	12	84	28	10,000,000	25	Penn Mex. Fuel	$1.25	May 31, 28	100	38	38	38	38	— 1⅛
55½	45⅜	56	47	60,479,600	25	Prairie Oil & Gas	.....	Aug. 31, 27	5,400	47⅝	47¼	†47	47	— ¼
190	132	223	172	81,000,000	100	Prairie Pipe Line	$3.50Q	July 31, 28	1,800	190	191	186	188½	— 2½
201½	175½	186	167	4,000,000	100	Solar Refining	$5S.A.	June 20, 28	50	180	180	180	180	+ 2
27¼	15½	35⅞	12	5,000,000	50	Southern Pipe Line	$2	Dec. 1, 27	200	14½	15⅛	14¼	15⅛	+ 1⅞
41½	35	53	36¾	20,000,000	25	South Penn Oil	50cQ	Mar. 31, 28	1,100	47	48¼	45⅛	48	+ 1
83	55½	100¾	70	3,500,000	100	South West Pa. Pipe Lines	‡$1Q	July 2, 28	.....	....	....	....	....	.....
81½	64⅝	83⅝	70⅞	230,788,513	25	S. O. Indiana	‡62½cQ	June 15, 28	68,800	75⅝	76¼	74⅞	75½	— ½
20⅞	14⅝	27¾	15	8,000,000	25	S. O. Kansas	.....	June 16, 24	300	22	22½	21⅞	22½	+ ½
130	111½	136⅛	122¼	17,103,011	25	S. O. Kentucky	$1Q	June 30, 28	2,500	128	128	126¼	126⅞	— 1⅛
49½	40	45⅞	39⅞	4,601,100	25	S. O. Nebraska	62cQ	June 20, 28	1,000	43	43½	42⅞	43⅛	— ⅜
87½	72	79½	71	14,000,000	25	S. O. Ohio	62½cQ	Apr. 2, 28	450	74	75¼	74	75½	+ 20
122	117¼	125	117	7,000,000	100	do pfd	$1.75Q	June 1, 28	10	118¾	118¾	118¾	118¾	
21	14½	26	16	30,844,000	25	Swan Finch Co	30cQ	June 30, 28	50	20¾	20¾	20¾	20¾	— 1¼
.....	.....	87⅛	72	124,941,600	25	Vacuum Oil	75cQ	June 20, 28	6,400	77⅜	81⅜	78⅛	81¼	+ 3¼

*New high †New low xEx dividend ‡Also extras.

Independent Oils on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended Aug. 18 Sales	First	High	Low	Last	Change
2⅛	.55	1½	.65	$ 5	Amer. Con. Oilfields	22,500	70	70	70	80	+ 5
7½	2¾	6⅝	3½	N.P.	Amer. Maracaibo	2,600	4⅛	4½	4⅛	4⅛	0
2¾	1	4	2¼	$ 10	Argo Oil	100	2½	2½	2½	2½	0
9¾	6¾	10¼	7⅝	10	Arkansas Nat. Gas	.....	....	....	....	....	.....
.....	.....	.....	.....	.....	Beacon Oil	.....	....	....	....	....	.....
40	20½	40½	32¾	N.P.	British American	.....	....	....	....	....	.....
28¼	15½	23⅞	13	25c	Carib Syndicate N	2,900	14⅜	15¼	†13	14½	+ ½
.....	.....	.....	.....	.....	do ctfs. of dep	.....	....	....	....	....	.....
58¾	40¼	71¼	54	$ 20	Cities Service	14,700	65⅛	65½	64⅞	65½	+ ⅛
95⅝	87	103½	94½	100	do pfd	600	99¼	99⅜	99	99¼	0
8⅞	7⅜	9⅜	8⅞	10	do pfd. B	100	9⅜	9⅜	9⅜	9⅜	0
29¼	22½	34⅝	28¼	10	do banker's shares	.....	....	....	....	....	.....
3⅞	1⅜	2¼	1⅛	1	Colombia Syndicate	2,200	1¼	1⅛	1¼	1¼	— ⅛
9¾	6¾	8¼	6⅜	10	Consolidated Royal	.....	....	....	....	....	.....
14⅞	9½	17½	10	N.P.	Creole Syndicate	19,800	12⅛	13	11⅞	12⅝	— ½
3	.50	3¼	.76	N.P.	Crown Central	900	1⅝	1⅝	1⅝	1⅝	— ⅛
12	4	30⅛	8⅛	N.P.	Darby Petroleum	500	20½	20½	20⅛	20⅛	— ⅜
11⅛	4	13½	7⅞	....	do trust ctfs	.....	....	....	....	....	.....
2½	.74	22	1	N.P.	Derby Oil & Refining	600	1¼	1½	1¼	1½	+ ½
16¾	4	15½	7½	N.P.	do pfd	2,900	15½	*15½	14⅜	15	— ½
3¾	1	2	1	N.P.	Gibson Oil	.....	....	....	....	....	.....
2	.40	.53	.15	N.P.	Gilliland ctfs	.....	....	....	....	....	.....
118	86¼	148½	101⅛	$ 25	Gulf Oil Corp	3,100	124	126	123	125¾	+ 1¾
2½	.80	7⅞	1	10	Intercontinent Pet	13,500	1	1½	1	1⅜	+ ¼
2¼	1⅛	3	1¼	N.P.	Kirby Petroleum	400	1⅜	1⅝	1⅜	1⅝	+ ⅛
10⅞	5⅛	9⅜	5½	N.P.	Leonard Oil & Dev	2,800	6⅛	6⅛	6	6	— ¼
27½	20	32⅜	20	N.P.	Lion Oil & Refg	100	27½	27½	27½	27½	0
59¾	37	57	48⅝	$ 25	Lone Star Gas	3,800	51¾	52	51½	51⅞	+ ⅛
2⅞	.80	1⅞	.78	1	Magdalena Synd	127,800	.89	1⅛	†.78	1	+ ⅛
21½	20⅞	22⅛	22⅛	N.P.	Manhattan Oil	.....	....	....	....	....	.....
52	12	45	36½	N.P.	Margay Oil	300	38¾	39¼	38¾	39¼	+ 2⅛
3	1½	40½	40½	$ 10	Mexican-Panuco	.....	....	....	....	....	.....
12⅛	5	8	4	N.P.	Mexico-Ohio Oil	.....	....	....	....	....	.....
1½	1	1⅛	.76	$ 1	Mountain & Gulf	200	81	81	81	81	0
29¼	22¾	28⅝	22⅜	10	Mountain Producers	1,200	23¼	23½	23¼	23¼	0
5⅞	4⅝	5⅝	4¾	5	New Bradford	200	5	5	5	5	0
6¾	4	5¼	3⅝	10	New England Fuel	100	4	4	4	4	+ ¼
16	9¼	11⅜	7⅛	1	New Mex. & Ariz	13,600	8½	11⅞	8½	10⅞	+ 2⅜
13⅞	9	15½	11¼	25	New York Oil	.....	....	....	....	....	.....
12⅝	9½	13¼	10¾	N.P.	North Cent. Texas	1,200	11¼	11½	11¼	11½	— ¼
23⅞	21¼	...	...	...	Okla. Nat. Gas ctfs.	.....	....	....	....	....	.....
9⅜	3¼	6	2¼	N.P.	Pandem	8,800	3⅜	3½	3	3	— ½
12⅛	7	15⅝	8½	N.P.	Panapec Oil	10,200	12⅝	12⅞	11⅜	11½	— 1⅜
9	7⅝	16½	10⅜	$ 25	Paragon Refg	400	16¼	*16½	16¼	16½	+ ¼
.37	.25	9	4	N.P.	Peer Oil Corp	.....	....	....	....	....	.....
13½	5⅛	7¾	5¼	10	Pennok Oil	500	5⅜	5½	5⅜	5½	+ ⅜
.....	.....	4⅛	3⅜	5	Pittsburgh Oil & Gas	.....	....	....	....	....	.....
24⅜	7	14½	8	25	Red Bank Oil	.....	....	....	....	....	.....
15½	3½	13	4⅛	N.P.	Reiter-Foster	40,000	12½	12¾	9	11	— 2
28⅜	15	31½	18	$ 25	Richfield Oil pfd	.....	....	....	....	....	.....
7	4½	9⅞	4⅝	N.P.	Ryan Consolidated	200	5½	6	5½	6	0
8	5¾	7¾	5⅜	$ 10	Salt Creek Cons	200	6½	6½	6½	6½	+ ¼
35½	27¼	35	27	10	Salt Creek Prod	1,700	27⅝	28	27⅝	27¾	+ ⅛
7	1¾	3½	1	5	Savoy Oil	.....	....	....	....	....	.....
26½	17	22⅞	13	10	Tidal Osage	500	18¼	18¼	17½	17½	— 1
23¾	15	21¾	13⅛	10	do non-voting	1,400	16½	16¾	16½	16½	0
92	63½	87	75	100	Transcontinental pfd	.....	....	....	....	....	.....
23¼	7	50	18	10	Venezuela-Mexico	.....	....	....	....	....	.....
7⅜	4¼	6⅝	4⅞	5	Venezuelan Petrol	1,100	5	5⅛	5	5	0
32⅜	19½	25	17½	N.P.	Wilcox Oil & Gas	200	18¾	18¾	18½	18½	0
8	4¾	8¼	5¾	$ 1	Woodley Petroleum	100	5¾	5¾	5¾	5¾	— ⅛
6	1¾	8⅜	2⅜	25	Y Oil & Gas (new)	.....	....	....	....	....	.....

*New High †New Low xEx Dividend

New York Curb Bonds

Week Ending Aug. 17

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	101	101	101	+1
Cities Serv. 5s '66	95⅜	94¾	94⅞	— ⅜
Cities Serv. 6s '66	103⅜	103⅜	103⅜	0
Cities Serv. G 5½s '42	94	93½	93¾	0
Cont. Oil 5¼s '37	95⅞	94½	94½	—1⅜
Empire O & R 5½s '42	92¾	92	92⅝	— ⅛
Galena Oil 7s '30	100⅝	100½	100½	— ¼
Gulf Oil 5s '37	100¼	99¾	100⅛	+ ⅛
Gulf Oil 5s '47	100⅛	99¾	100⅛	+ ⅛
Independent Oil 6s '39	101	100⅞	101	0
Richfield Oil 6s '41	135	130	133⅛	—4⅞
Richfield Oil 5½s '31	100	100	100	0
Sun Oil 5½s '39	101¼	101	101	— ¼
Trans. Cont. Oil 7s '30	105⅝	105⅝	105⅝	0
Valvoline Oil 7s '37	106	106	106	0
Warner Quinlan 6s '42	108	107¾	107¾	—1

New York Bonds

Week Ending Aug. 17

	High	Low	Last	Ch'ge
Assoc. Oil gold 6s	102½	102¼	102½	+ ¼
Atlantic Refg. deb. 5s	100¾	99⅞	99⅞	+ ⅞
Barns. Corp. 6s	101½	100½	101¼	+ ⅛
Barns. Corp. 8s ex-war	92	90	90	— 8¼
Cal. Pet	98¾	97	98⅛	0
General Petroleum 5s	100¾	100⅛	100⅛	—2¼
Humble Oil & Refg. 5½s	101⅜	100⅞	100⅞	— ½
Humble Oil & Refg. 5s	99¾	99	99¾	0
Mid-Cont. Pet 6½s	105¼	105	105¼	0
Pan Amer. P & T 7s	104¾	104¾	104¾	0
Pan Amer. P & T 6s	102¾	102½	102½	— ¼
Pan Amer. P & T 6s	95	95	95	— ¼
Pierce Pet. 5¼s	91½	91¼	91½	+ ¼
Pure Oil 5½s	98¾	98⅜	98⅛	+ ¼
Shell Union Oil 5s	96⅜	95¾	96¼	— ¼
Simms Pet 6s	101	101	101	— ½
Sinclair Con. Oil 7s	102	101	101½	— ½
Sinclair Con. Oil 6½s	99	98¾	98⅞	— ⅛
Sinclair Con. Oil 6s D	99	98⅝	99	0
Sinclair Con. Crude 6s	97⅛	96½	97	0
Sinclair Pipeline	94	93	93	— ½
Skelly Oil 5½s	92	91⅞	91⅞	— ⅛
S. O. N. Y. 4½s	94⅞	94½	94¾	+ ⅛
S. O. N. J. deb. 5s	103¼	102	103⅛	+ ⅝
Union Oil of Calif 5s C	98⅜	97⅝	97⅝	— ⅞
White Eagle Oil 5½s	97	96¾	96¾	+ ⅜

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